Columbia Municipal Power Plant CCR Surface Impoundment Closure Plan

City of Columbia

Columbia Municipal Power Plant
Project No. 85059

October 2015

Columbia Municipal Power Plant CCR Surface Impoundment Closure Plan

prepared for

City of Columbia
Columbia Municipal Power Plant
Columbia, Missouri

Project No. 85059

October 2015

prepared by

Burns & McDonnell Engineering Company, Inc.
Kansas City, Missouri

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FIGURE 1 – CCR SURFACE IMPOUNDMENT

ATTACHMENT A – NPDES PERMIT

INDEX AND CERTIFICATION

City of Columbia
Columbia Municipal Power Plant
CCR Surface Impoundment
Closure Plan
Project No. 85059

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Certification

I hereby certify, as a Professional Engineer in the state of Missouri, that the information in this document was assembled under my direct personal charge. This report is not intended or represented to be suitable for reuse by the City of Columbia or others without specific verification or adaptation by the Engineer.

10/5/15

1.0 INTRODUCTION

This Closure Plan (Plan) describes and references the procedures involved with closing the Columbia Municipal Power Plant's coal combustion residuals (CCR) surface impoundment. Clean closure of the CCR surface impoundment will be obtained by removing the CCR material in such a manner that minimizes the need for further maintenance and eliminates post-closure care requirements.

This Plan will be submitted along with the intent to initiate closure to satisfy the requirements of 40 CFR 257.100(c)(1) of the Final CCR Rule published by the United States Environmental Protection Agency (EPA) on April 17, 2015.

1.1 Site Description

The Columbia Municipal Power Plant (Plant) is located in Boone County, Missouri at 1501 Business Loop 70 East, Columbia, Missouri 65201. The first power production at the Plant occurred around 1914. The Plant has one surface impoundment (Site) that stores the CCR material generated at the Plant. The Plant's CCR surface impoundment is locally known as Moore's Lake and was originally constructed no later than 1896. The impoundment has a maximum surface area of 6 acres and a shoreline perimeter of approximately 2,150 feet. In July of 2013, a bathymetric survey of the Site showed the water volume in was approximately 23.3 acre-feet. Currently, the Site drains to an unnamed tributary of Bear Creek. An aerial view of the Site and closure area is shown on Figure 1.

The Site is used as a settling pond for CCR, receiving sluiced bottom ash, fly ash, boiler blow-down, cooling tower blow-down, and stormwater runoff from the Plant. The Site will ceased receipt of CCR by October 14, 2015 in accordance with the CCR Rule, allowing it to be classified as an inactive CCR surface impoundment as defined by 40 CFR 257.53.

The Site has a maximum storage capacity of 45 acre-feet of CCR material. As of August 2013, approximately 21.7 acre-feet of CCR material was estimated to be stored at the Site. CCR materials stored in the surface impoundment will be removed during the clean closure process.

* * * * *

2.0 CLOSURE PLAN

2.1 General Closure Standards

The Site will be closed in accordance with the closure standards outlined by 40 CFR 257.100 for inactive surface impoundments. A summary of the applicable standards is presented below:

- The Site will be closed by the complete removal and decontamination of all affected areas;
- All closure activities will be completed no later than April 17, 2018; and
- Notifications for the intent to initiate closure, annual progress reports, and notice of closure completion, at minimum, will be submitted in accordance with section 2.3 below.

2.2 Closure Description

The Site will be closed by the complete removal of all CCR material in accordance with 40 CFR 257.100(b)(5). Closure of the Site will be complete prior to April 17, 2018, and therefore, is exempt from all other requirements of the Closure and Post-Closure Care subpart of 40 CFR 257.

Prior to initiating closure, stormwater controls will be implemented to the extent practical to reduce the amount of stormwater being directed to the Site during the closure process. The surface water will then be pumped or siphoned out of the impoundment and discharged in compliance with the current NPDES Permit for the Site. The Permit is included as Attachment A.

After the surface water is removed, the CCR material will be excavated and transported off-site. The CCR material removed from the Site will either be disposed in a Subtitle D-lined municipal solid waste (MSW) landfill regulated to accept CCR, or it may be beneficially reused as described in Section 2.2.1 below.

After all CCR has been removed and clean closure is complete, site reclamation may be required. Minor surface grading and associated erosion control measures will be implemented to restore the Site. The impoundment will remain to naturally receive stormwater and serve as a retention pond.

2.2.1 CCR Beneficial Reuse

The CCR removed from the Site may be beneficially reused in accordance with the definition of *Beneficial use of CCR* as described in 40 CFR 257.53. If elected for beneficial use, the CCR will, at minimum, comply with the following:

- The CCR will provide a functional benefit;
- The CCR will substitute for the use of a virgin material, conserving natural resources;

- The CCR will meet relevant product specifications, regulatory standards or design standards when available; and
- Environmental releases to groundwater, surface water, soil and air from the CCR will be comparable to or lower than those from analogous products made without CCR; or environmental releases to groundwater, surface water, soil and air from the CCR will be at or below relevant regulatory and health-based benchmarks for human and ecological receptors during use.

Anticipated beneficial reuses include use on roadways during winter weather in place of road salt, use as structural fill, and mine stabilization.

2.2.2 Groundwater Monitoring and Corrective Action

Pursuant to 40 CFR 257.90(a), the Site is not subject to groundwater monitoring or corrective action requirements.

2.3 Recordkeeping and Notification Requirements

Pursuant to 40 CFR 257.100(c), the following closure documents will be completed and placed in the current facility operating record as they become available:

- Notice of the intent to initiate closure of the Site;
- Annual progress reports of closure implementation of the Site; and
- Notice of closure completion of the Site.

All closure documents will be kept in the current operating record at the facility for at least five years following the date of each record, pursuant to 40 CFR 257.105(i).

Missouri Department of Natural Resources (MDNR) will be notified in a timely manner when closure documents have been placed in the operating record, pursuant to 40 CFR 257.106(i).

2.3.1 Notice of Intent to Initiate Closure

The notice of intent to initiate closure, along with this Plan, will be submitted no later than December 17, 2015 pursuant to 40 CFR 257.100(c)(1). A description of how the Site will be closed, a schedule for completing closure activities, and the required certifications will be included with the notice of intent to initiate closure. A qualified professional engineer will certify that the closure of the Site is technically feasible within the required timeframe.

2.3.2 Annual Progress Reports

The first annual progress report will be submitted no later than 13 months after closure is initiated. Each successive progress report will be submitted no later than 12 months after the previous progress report. The notice of closure will be submitted within 60 days of completion of closure. Progress reports shall be in accordance with 40 CFR 257.100(c).

2.3.3 Notice of Closure Completion

The notice of closure completion will include a written certification from a qualified professional engineer certifying the Site was closed in accordance with 40 CFR 257.100(b)(5).

2.3.4 CCR Website

Pursuant to 40 CFR 257.107(a), the Owner of the Site is required to maintain a publicly accessible website titled "CCR Rule Compliance Data and Information." All closure documents will be posted to the Owner's CCR website as they become available as required by 40 CFR 257.107(i).

2.4 Closure Schedule

The intent to initiate closure will be submitted prior to December 17, 2015. Pursuant to 40 CFR 257.102(e)(4)(i), the Site is not subject to the closure initiation timeframes specified in 40 CFR 257.102(e)(1) and (e)(2). Detailed closure planning and engineering is planned for the fall of 2015 through the spring of 2016.

Bids for Site closure are planned to be received and construction to begin in the summer of 2016. Within 60 days of final completion, the notice of closure completion will be submitted to MDNR.

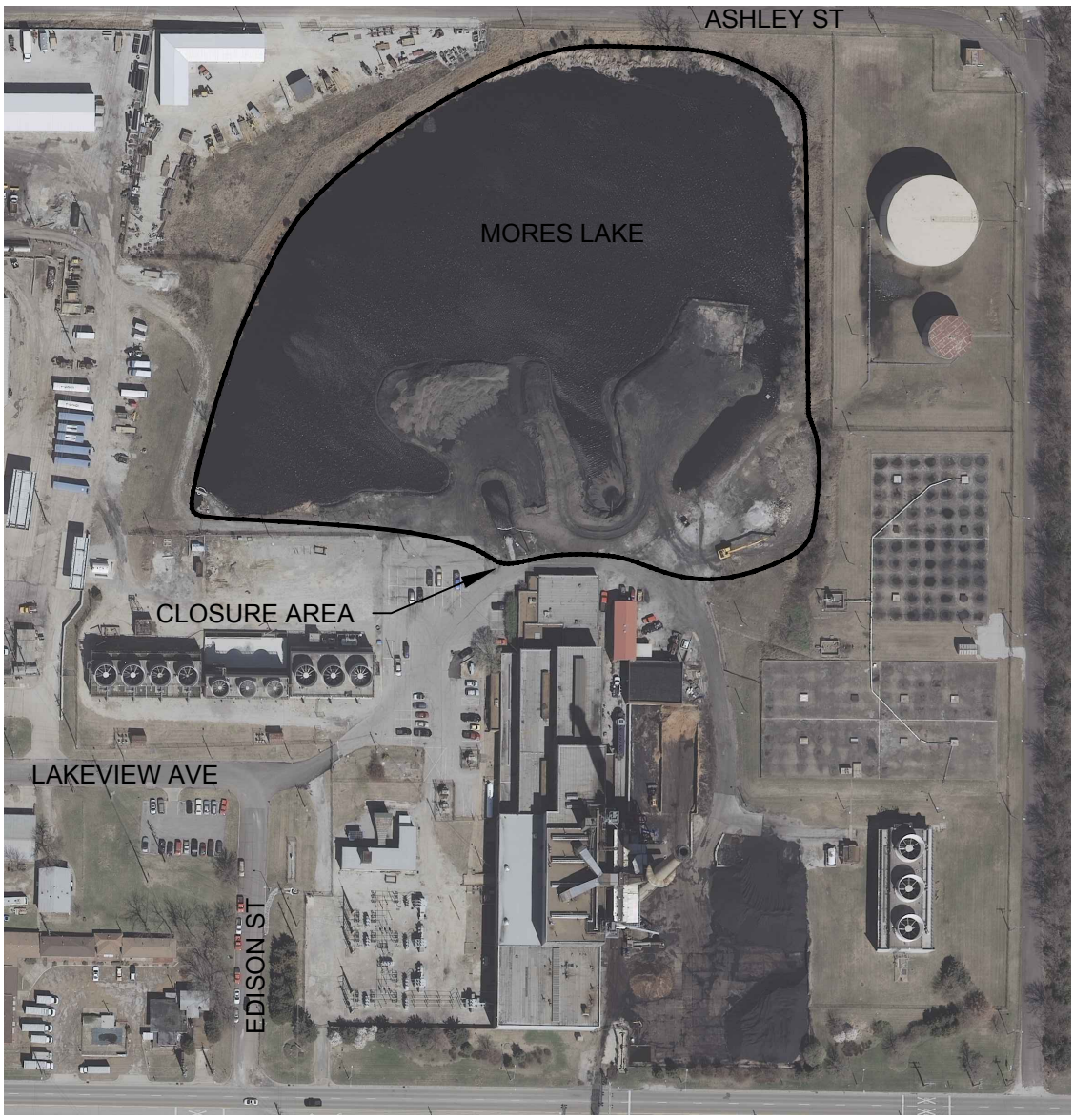
Closure completion will be completed no later than April 17, 2018 as required by 40 CFR 257.100(b).

2.5 Post-Closure Care

Pursuant to 40 CFR 257.104(a)(3), the Site is not subject to post-closure care.

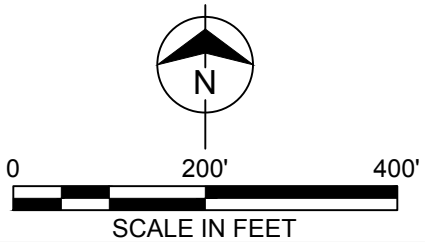
* * * * *

FIGURE 1 – CCR SURFACE IMPOUNDMENT



NOTES:

1. CLOSURE AREA BOUNDARY IS APPROXIMATE.
2. AERIAL IMAGE PROVIDED BY THE CITY OF COLUMBIA.
3. AERIAL IMAGE DATE 2011



BURNS McDONNELL

Figure 1
COLUMBIA MUNICIPAL POWER PLANT
CCR SURFACE IMPOUNDMENT
COLUMBIA, MISSOURI

ATTACHMENT A – NPDES PERMIT

STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No.	MO-0004979
Owner:	City of Columbia
Address:	701 East Broadway, Columbia, MO 65201
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	Columbia Municipal Power Plant
Facility Address:	1501 Business Loop 70 East, Columbia, MO 65201
Legal Description:	SEE PAGE TWO
Latitude/Longitude:	SEE PAGE TWO
Receiving Stream:	SEE PAGE TWO
First Classified Stream and ID:	SEE PAGE TWO
USGS Basin & Sub-watershed No.:	SEE PAGE TWO

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

SEE PAGE TWO

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

July 6, 2012
Effective Date

March 12, 2014
Modification Date

Sara Parker Pauley
Sara Parker Pauley, Director, Department of Natural Resources

July 5, 2017
Expiration Date

John Madras
John Madras, Director, Water Protection Program

FACILITY DESCRIPTION (continued)

Outfall #001 – POTW/Power Plant – SIC #4911
East and West Cooling Towers blowdown and overflow / coal pile stormwater runoff overflow
Design flow is 0.075 MGD

Legal Description:	Landgrant 2753, Boone County
UTM Coordinates:	X=559181.565, Y=4313015.557
Receiving Stream:	Unnamed tributary to Bear Creek (U)
First Classified Stream and ID:	Bear Creek (C) (01015)
USGS Basin & Sub-watershed No.:	(10300102-0706)

Outfall #002 – POTW/Power Plant – SIC #4911
Boiler Blowdown / zeolite water softener / reverse osmosis / ash pit sump / ash sluice / coal pile runoff / miscellaneous water uses through plant drains/ settling basin
Design flow is 0.87 MGD

Legal Description:	Landgrant 2753, Boone County
UTM Coordinates:	X=559024.113, Y=4313222.076
Receiving Stream:	Unnamed tributary to Bear Creek (U)
First Classified Stream and ID:	Bear Creek (C) (01015)
USGS Basin & Sub-watershed No.:	(10300102-0706)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until three (3) years from the date of issuance of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001 (Note 1)						
Flow	MGD	*		*	once/month	24 hr. estimate
Total Suspended Solids	mg/L	50		50	once/month	grab
Biochemical Oxygen Demand$_5$	mg/L	*		*	once/month	grab
Chemical Oxygen Demand	mg/L	*		*	once/month	grab
pH – Units	SU	**		**	once/month	grab
Oil & Grease	mg/L	20		15	once/month	grab
Total Residual Chlorine	mg/L	*		*	once/month	grab
Free Available Chlorine	mg/L	0.5		0.2	once/month	grab
Chloride + Sulfate	mg/L	*		*	once/month	grab
Chloride	mg/L	*		*	once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE AUGUST 28, 2012. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED PART I STANDARD CONDITIONS DATED October 1, 1980, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until three (3) years from the date of issuance of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001 (Note 1)						
Aluminum, Total Recoverable	µg/L	*		*	once/quarter***	grab
Antimony, Total Recoverable	mg/L	*		*	once/quarter***	grab
Arsenic, Total Recoverable	µg/L	*		*	once/quarter***	grab
Beryllium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Cadmium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium III, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium VI, Dissolved	µg/L	*		*	once/quarter***	grab
Copper, Total Recoverable	µg/L	*		*	once/quarter***	grab
Cyanide, Amenable to Chlorination	µg/L	*		*	once/quarter***	grab
Iron, Total Recoverable	µg/L	*		*	once/quarter***	grab
Lead, Total Recoverable	µg/L	*		*	once/quarter***	grab
Mercury, Total Recoverable	µg/L	*		*	once/quarter***	grab
Nickel, Total Recoverable	µg/L	*		*	once/quarter***	grab
Selenium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Silver, Total Recoverable	µg/L	*		*	once/quarter***	grab
Thallium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter***	grab
Hardness, Total	mg/L	*		*	once/quarter***	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2012. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
Polychlorinated Biphenyls	µg/L	****		****	once/year	grab
MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE JANUARY 28, 2013						

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED PART I STANDARD CONDITIONS DATED NOVEMBER 1, 2013, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective two (2) years before the date of expiration of this permit and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001 (Note 1)						
Flow	MGD	*		*	once/month	24 hr. estimate
Total Suspended Solids	mg/L	50		50	once/month	grab
Biochemical Oxygen Demand$_5$	mg/L	*		*	once/month	grab
Chemical Oxygen Demand	mg/L	*		*	once/month	grab
pH – Units	SU	**		**	once/month	grab
Oil & Grease	mg/L	15		10	once/month	grab
Total Residual Chlorine (Note 2)	mg/L	0.017 (0.13ML)		0.008 (0.13ML)	once/month	grab
Free Available Chlorine	mg/L	0.5		0.2	once/month	grab
Chloride + Sulfate	mg/L	1000		1000	once/month	grab
Chloride	mg/L	377.8		188.3	once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE AUGUST 28, 2015. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED PART I STANDARD CONDITIONS DATED NOVEMBER 1, 2013, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective two (2) years before the date of expiration of this permit and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001 (Note 1)						
Aluminum, Total Recoverable	µg/L	*		*	once/quarter***	grab
Antimony, Total Recoverable	mg/L	*		*	once/quarter***	grab
Arsenic, Total Recoverable	µg/L	*		*	once/quarter***	grab
Beryllium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Cadmium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium III, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium VI, Dissolved	µg/L	*		*	once/quarter***	grab
Copper, Total Recoverable	µg/L	*		*	once/quarter***	grab
Cyanide, Amenable to Chlorination (Note 3)	µg/L	*		*	once/quarter***	grab
Iron, Total Recoverable	µg/L	*		*	once/quarter***	grab
Lead, Total Recoverable	µg/L	*		*	once/quarter***	grab
Mercury, Total Recoverable	µg/L	*		*	once/quarter***	grab
Nickel, Total Recoverable	µg/L	*		*	once/quarter***	grab
Selenium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Silver, Total Recoverable	µg/L	*		*	once/quarter***	grab
Thallium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter***	grab
Hardness, Total	mg/L	*		*	once/quarter***	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2015. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
Polychlorinated Biphenyls	µg/L	****		****	once/year	grab
MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE JANUARY 28, 2012.						

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED PART I STANDARD CONDITIONS DATED NOVEMBER 1, 2013, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until three (3) years from the date of issuance of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #002						
Flow	MGD	*		*	once/month	24 hr. estimate
Total Suspended Solids	mg/L	50		50	once/month	grab
Biochemical Oxygen Demand$_5$	mg/L	*		*	once/month	grab
Chemical Oxygen Demand	mg/L	*		*	once/month	grab
pH – Units	SU	**		**	once/month	grab
Oil & Grease	mg/L	20		15	once/month	grab
Total Residual Chlorine	mg/L	*		*	once/month	grab
Free Available Chlorine	mg/L	0.5		0.2	once/month	grab
Chloride + Sulfate	mg/L	*		*	once/month	grab
Chloride	mg/L	*		*	once/month	grab
Copper, Total Recoverable	mg/L	1.0		1.0	once/month	grab
Iron, Total Recoverable	µg/L	*		*	once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE AUGUST 28, 2012. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I, II, & III STANDARD CONDITIONS DATED NOVEMBER 1, 2013 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until three (3) years from the date of issuance of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #002						
Aluminum, Total Recoverable	µg/L	*		*	once/quarter***	grab
Antimony, Total Recoverable	mg/L	*		*	once/quarter***	grab
Arsenic, Total Recoverable	µg/L	*		*	once/quarter***	grab
Beryllium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Cadmium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium III, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium VI, Dissolved	µg/L	*		*	once/quarter***	grab
Cyanide, Amenable to Chlorination	µg/L	*		*	once/quarter***	grab
Lead, Total Recoverable	µg/L	*		*	once/quarter***	grab
Mercury, Total Recoverable	µg/L	*		*	once/quarter***	grab
Nickel, Total Recoverable	µg/L	*		*	once/quarter***	grab
Selenium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Silver, Total Recoverable	µg/L	*		*	once/quarter***	grab
Thallium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter***	grab
Hardness, Total	mg/L	*		*	once/quarter***	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2012. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
Whole Effluent Toxicity (WET) test	% Survival	SEE SPECIAL CONDITION #17			once/year	Composite**
Polychlorinated Biphenyls	µg/L	****		****	once/year	grab
MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE JANUARY 28, 2012.						

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED PART I STANDARD CONDITIONS DATED NOVEMBER 1, 2013, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective two (2) years before the date of expiration of this permit and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #002						
Flow	MGD	*		*	once/month	24 hr. estimate
Total Suspended Solids	mg/L	50		50	once/month	grab
Biochemical Oxygen Demand$_5$	mg/L	*		*	once/month	grab
Chemical Oxygen Demand	mg/L	*		*	once/month	grab
pH – Units	SU	**		**	once/month	grab
Oil & Grease	mg/L	15		10	once/month	grab
Total Residual Chlorine (Note 2)	mg/L	0.017 (0.13ML)		0.008 (0.13ML)	once/month	grab
Free Available Chlorine	mg/L	0.5		0.2	once/month	grab
Chloride + Sulfate	mg/L	1000		1000	once/month	grab
Chloride	mg/L	377.8		188.3	once/month	grab
Copper, Total Recoverable	µg/L	40.6		15.8	once/month	grab
Iron, Total Recoverable	µg/L	1825.6		627.6	once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE AUGUST 28, 2015. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I, II, & III STANDARD CONDITIONS DATED NOVEMBER 1, 2013 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective two (2) years before the date of expiration of this permit and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #002						
Aluminum, Total Recoverable	µg/L	*		*	once/quarter***	grab
Antimony, Total Recoverable	µg/L	*		*	once/quarter***	grab
Arsenic, Total Recoverable	mg/L	*		*	once/quarter***	grab
Beryllium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Cadmium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium III, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium VI, Dissolved	µg/L	*		*	once/quarter***	grab
Cyanide, Amenable to Chlorination (Note 3)	µg/L	*		*	once/quarter***	grab
Lead, Total Recoverable	µg/L	*		*	once/quarter***	grab
Mercury, Total Recoverable	µg/L	*		*	once/quarter***	grab
Nickel, Total Recoverable	µg/L	*		*	once/quarter***	grab
Selenium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Silver, Total Recoverable	µg/L	*		*	once/quarter***	grab
Thallium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter***	grab
Hardness, Total	mg/L	*		*	once/quarter***	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2015. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
Whole Effluent Toxicity (WET) test	% Survival	SEE SPECIAL CONDITION #17			once/year	Composite**
Polychlorinated Biphenyls	µg/L	****		****	once/year	grab
MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE JANUARY 28, 2013.						

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED PART I STANDARD CONDITIONS DATED NOVEMBER 1, 2013, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.
** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.
*** See table below for quarterly sampling
**** There shall be no discharge of polychlorinated biphenyl compounds per the applicable section of 40 CFR 423.13. A sufficiently sensitive test method must be used.

Sample discharge at least once for the months of:		Report is due:
January, February, March	(1st Quarter)	April 28
April, May, June	(2nd Quarter)	July 28
July, August, September	(3rd Quarter)	October 28
October, November, December	(4th Quarter)	January 28

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

Note 1 - A representative grab sample shall be collected within the first 60 minutes of storm events that result in a discharge from Outfall #001. Storm events include rainfall as well as run-off from the melting of frozen precipitation.

Note 2 - This permit contains a Total Residual Chlorine (TRC) limit.
(a) This effluent limit is below the minimum quantification level (ML) of the most common and practical EPA approved CLTRC methods. The Department has determined the current acceptable ML for total residual chlorine to be 0.13 mg/L when using the DPD Colorimetric Method #4500 – CL G. from Standard Methods for the Examination of Waters and Wastewater. The permittee will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values greater than or equal to the minimum quantification level of 0.13 mg/L will be considered violations of the permit and values less than the minimum quantification level of 0.13 mg/L will be considered to be in compliance with the permit limitation. The minimum quantification level does not authorize the discharge of chlorine in excess of the effluent limits stated in the permit.
(b) Do not chemically dechlorinate if it is not needed to meet the limits in your permit.

Note 3 - This permit contains a Cyanide, Amenable to Chlorination monitoring requirement. The permittee will conduct analyses in accordance with Cyanide by Automated Colorimetric Method #335.3 from the U.S. EPA National Exposure Research Laboratory, or equivalent, and report actual analytical values

Note 4 - Test procedures for the analysis of pollutants shall be in accordance with the references methods listed in Missouri Clean Water Commission Effluent Regulation 10 CSR 20-7015(9)(A)2, unless alternates are approved by the department. The facility shall ensure that the testing lab uses an approved test method with a detection limit below water quality criteria for any sampling conducted, even for parameters that are listed as monitoring only, as the data collected will be used to determine if limitations need to be established.

C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
   (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
      (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
      (2) controls any pollutant not limited in the permit.
   (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
   (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

   The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

2. Report as no-discharge when a discharge does not occur during the report period.

3. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).

4. Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate that the units in a particular location cannot operate at or below this level of chlorination.
5. Report as no-discharge when a discharge does not occur during the report period.

6. Effluent shall not elevate or depress the temperature of the first classified receiving stream more than five degrees Fahrenheit.

7. All fueling facilities present on the site shall adhere to applicable federal and state regulations concerning underground storage, above ground storage, and dispensers, including spill prevention, control and counter measures.

8. Any pesticide discharge from any point source shall comply with the requirements of Federal Insecticide, Fungicide and Rodenticide Act, as amended (7 U.S.C. 136 et. seq.) and the use of such pesticides shall be in a manner consistent with its label.

C. SPECIAL CONDITIONS (continued)

9. Water Quality Standards
   (a) To the extent required by law, discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
   (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
      (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
      (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
      (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
      (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
      (5) There shall be no significant human health hazard from incidental contact with the water;
      (6) There shall be no acute toxicity to livestock or wildlife watering;
      (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
      (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

10. Changes in Discharges of Toxic Substances
    The permittee shall notify the Director as soon as it knows or has reason to believe:
    (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
       (1) One hundred micrograms per liter (100 µg/L);
       (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
       (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
       (4) The level established in Part A of the permit by the Director.
    (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
    (c) That the effluent limit established in part A of the permit will be exceeded.

11. In accordance with, and in addition to, Standard Conditions Part I, the permittee is to notify the Department by telephone within 24 hours of becoming aware of any event that may endanger health or the environment. Leaving a message on a Department staff member's voicemail does not satisfy this reporting requirement. During holidays, during the weekends, after normal business hours, or if the permit holder cannot reach regional office staff for any reason, the permit holder is instructed to report the situation to the Department's 24 hour Environmental Emergency Response hotline at (573) 634-2436. In addition, the permittee shall submit to the Department a written report with five (5) days of the time the permittee becomes aware of the circumstances. The written report shall include a description of the discharge or situation and cause of any noncompliance, the period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent `recurrence of the non-complying discharge. These events include but are not limited to (a) any spill, of any material, that leaves the property of the facility and (b) any spill, of any material outside of secondary containment and exposed to precipitation, greater than 25 gallons or an equivalent volume of solid material. Federal Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

12. The permit requires development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must be prepared within 60 days and implemented within 90 days of the permit issuance. The SWPPP must be kept on-site and should not be sent to the department unless specifically requested. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in the following document:

    Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators, (Document number EPA 833-B-09-002) published by the United States Environmental Protection Agency (USEPA) in February 2009.

C. SPECIAL CONDITIONS (continued)

The SWPPP must include the following:

(a) A listing of Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter stormwater. Minimum BMPs are listed in Special Condition #13 below.

(b) A provision for providing training to all personnel involved in material handling and storage, and housekeeping of areas having materials exposed to stormwater. Proof of training shall be submitted on request of the Department.

(c) The SWPPP must include a schedule for monthly site inspections and brief written reports. The inspections must include observations and evaluations of BMP effectiveness, deficiencies, and corrective measures that will be taken. Deficiencies must be corrected within seven days and the actions taken to correct the deficiencies shall be included with the written report, including photographs. Any corrective measure that necessitates major construction may also need a construction permit. Inspection reports must be kept on site with the SWPPP and maintained for a period of five years. These must be made available to the Department upon request.

(d) A provision for designating an individual to be responsible for environmental matters. The provision shall also include alternates in the event that the primary responsible person is not available.

13. Permittee shall adhere to the following minimum Best Management Practices:

(a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of storm water from these substances.

(b) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents. Implement good housekeeping practices to keep solid waste from entering waters of the state.

(c) Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to storm water or provide other prescribed BMP's such as plastic lids and/or portable spill pans to prevent the commingling of storm water with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.

(d) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property.

14. The purpose of the SWPPP and the BMPs listed therein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was not effective in preventing pollution [10 CSR 20-2.010(56)] of waters of the state, and corrective action means the facility took steps to eliminate the deficiency.

15. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards. A method is "sufficiently sensitive" when (1) the method quantitation level is at or below the level of the applicable water quality criterion for the pollutant or (2) the method quantitation level is above the applicable water quality criterion, but the amount of pollutant in a facility's discharge is high enough that the method detects and quantifies the level of pollutant in the discharge. These methods are even required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established.

16. APPENDIX A TO 40 CFR PART 423—126 PRIORITY POLLUTANTS – The facility must designate an internal sample point for each cooling tower blowdown and sample the locations annually. There shall be no detectable amount (see Special Condition #15) of the 126 Priority Pollutants as listed in Appendix A to Part 423 [40 CFR 423.15(j)(1)] (see Page 14), except as allowed in the regulation for Total Chromium (0.2 mg/L) and Zinc (1.0 mg/L). As an alternative, the facility may maintain and submit records including Safety Data Sheets (SDS) of the cooling tower chemicals to document that none of the listed chemicals, apart from Chromium or Zinc, are added for cooling water treatment. The facility must submit SDS copies with the first quarterly Discharge Monitoring Report following issuance of the permit and at any time thereafter when there is a change in cooling water treatment chemicals. If no biocides or chemicals are used in the cooling tower water, then report "No biocides or chemicals used". At a minimum, the facility shall be required to sample for Total Chromium and Zinc. The sample results shall be included in an annual report submitted to the Department by **January 28th of each year**, and shall be for the reporting period of January 1st to December 31st.

C. SPECIAL CONDITIONS (continued)

126 PRIORITY POLLUTANTS

001 Acenaphthene	045 Methyl chloride (dichloromethane)	090 Dieldrin
002 Acrolein	046 Methyl bromide (bromomethane)	091 Chlordane (technical mixture and metabolites)
003 Acrylonitrile	047 Bromoform (tribromomethane)	092 4,4-DDT
004 Benzene	048 Dichlorobromomethane	093 4,4-DDE (p,p-DDX)
005 Benzidine	051 Chlorodibromomethane	094 4,4-DDD (p,p-TDE)
006 Carbon tetrachloride (tetrachloromethane)	052 Hexachlorobutadiene	095 Alpha-endosulfan
007 Chlorobenzene	053 Hexachloromyclopentadiene	096 Beta-endosulfan
008 1,2,4-trichlorobenzene	054 Isophorone	097 Endosulfan sulfate
009 Hexachlorobenzene	055 Naphthalene	098 Endrin
010 1,2-dichloroethane	056 Nitrobenzene	099 Endrin aldehyde
011 1,1,1-trichloreothane	057 2-nitrophenol	100 Heptachlor
012 Hexachloroethane	058 4-nitrophenol	101 Heptachlor epoxide (BHC-hexachlorocyclohexane)
013 1,1-dichloroethane	059 2,4-dinitrophenol	102 Alpha-BHC
014 1,1,2-trichloroethane	060 4,6-dinitro-o-cresol	103 Beta-BHC
015 1,1,2,2-tetrachloroethane	061 N-nitrosodimethylamine	104 Gamma-BHC (lindane)
016 Chloroethane	062 N-nitrosodiphenylamine	105 Delta-BHC (PCB-polychlorinated biphenyls)
018 Bis(2-chloroethyl) ether	063 N-nitrosodi-n-propylamin	106 PCB–1242 (Arochlor 1242)
019 2-chloroethyl vinyl ether (mixed)	064 Pentachlorophenol	107 PCB–1254 (Arochlor 1254)
020 2-chloronaphthalene	065 Phenol	108 PCB–1221 (Arochlor 1221)
021 2,4, 6-trichlorophenol	066 Bis(2-ethylhexyl) phthalate	109 PCB–1232 (Arochlor 1232)
022 Parachlorometa cresol	067 Butyl benzyl phthalate	110 PCB–1248 (Arochlor 1248)
023 Chloroform (trichloromethane)	068 Di-N-Butyl Phthalate	111 PCB–1260 (Arochlor 1260)
024 2-chlorophenol	069 Di-n-octyl phthalate	112 PCB–1016 (Arochlor 1016)
025 1,2-dichlorobenzene	070 Diethyl Phthalate	113 Toxaphene
026 1,3-dichlorobenzene	071 Dimethyl phthalate	114 Antimony
027 1,4-dichlorobenzene	072 1,2-benzanthracene (benzo(a) anthracene	115 Arsenic
028 3,3-dichlorobenzidine	073 Benzo(a)pyrene (3,4-benzo-pyrene)	116 Asbestos
029 1,1-dichloroethylene	074 3,4-Benzofluoranthene (benzo(b) fluoranthene)	117 Beryllium
030 1,2-trans-dichloroethylene	075 11,12-benzofluoranthene (benzo(b) fluoranthene)	118 Cadmium
031 2,4-dichlorophenol	076 Chrysene	119 Chromium
032 1,2-dichloropropane	077 Acenaphthylene	120 Copper
033 1,2-dichloropropylene (1,3-dichloropropene)	078 Anthracene	121 Cyanide, Total
034 2,4-dimethylphenol	079 1,12-benzoperylene (benzo(ghi) perylene)	122 Lead
035 2,4-dinitrotoluene	080 Fluorene	123 Mercury
036 2,6-dinitrotoluene	081 Phenanthrene	124 Nickel
037 1,2-diphenylhydrazine	082 1,2,5,6-dibenzanthracene (dibenzo(,h) anthracene)	125 Selenium
038 Ethylbenzene	083 Indeno (,1,2,3-cd) pyrene (2,3-o-pheynylene pyrene)	126 Silver
039 Fluoranthene	084 Pyrene	127 Thallium
040 4-chlorophenyl phenyl ether	085 Tetrachloroethylene	128 Zinc
041 4-bromophenyl phenyl ether	086 Toluene	129 2,3,7,8-tetrachloro-dibenzo-p-dioxin (TCDD)
042 Bis(2-chloroisopropyl) ether	087 Trichloroethylene	
043 Bis(2-chloroethoxy) methane	88 Vinyl chloride (chloroethylene)	
044 Methylene chloride (dichloromethane)	089 Aldrin	

C. SPECIAL CONDITIONS (continued)

17. An annual operating report must be submitted to the Northeast Regional Office by October 28 of each year that details the date and time, volume and methods of removal and offsite disposal of coal combustion residuals.

18. Whole Effluent Toxicity (WET) tests shall be conducted as follows:

SUMMARY OF WET TESTING FOR THIS PERMIT				
OUTFALL	A.E.C. %	FREQUENCY	SAMPLE TYPE	MONTH
#002	100 %	ONCE/YEAR	COMPOSITE	ANY

(a) Test Schedule and Follow-Up Requirements

(1) Perform a MULTIPLE-dilution test in the months and at the frequency specified above. For tests which are successfully passed, submit test results using the Department's WET test report form #MO-780-1899 along with complete copies of the test reports as received from the laboratory, including copies of chain-of-custody forms within 30 calendar days of availability to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102. If the effluent passes the test, do not repeat the test until the next test period.

a. For discharges of storm water, samples shall be collected within three hours from when discharge first occurs.
b. Samples submitted for analysis of storm water discharges shall be collected as a grab.
c. For discharges of non-storm water, samples shall be collected only when precipitation has not occurred for a period of forty-eight hours prior to sample collection. In no event shall sample collection occur simultaneously with the occurrence of precipitation excepting for storm water samples.
d. A twenty-four hour composite sample shall be submitted for analysis of non-storm water discharges.
e. Upstream receiving water samples, where required, shall be collected upstream from any influence of the effluent where downstream flow is clearly evident.
f. Samples submitted for analysis of upstream receiving water may be collected as either a grab or twenty-four-hour composite as appropriate to the nature of the discharge.
g. Chemical and physical analysis of the upstream control and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping.
h. Any and all chemical or physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% Effluent concentration in addition to analyses performed upon any other effluent concentration.
i. All chemical analyses included in the Missouri Department of Natural Resources WET test report form #MO-780-1899 shall be performed and results shall be recorded in the appropriate field of the report form.
j. Where flow-weighted composite sample is required for analysis, the samples shall be composited at the laboratory where the test is to be performed.
k. Where in stream testing is required downstream from the discharge, sample collection shall occur immediately below the established Zone of Initial Dilution in conjunction with or immediately following a release or discharge.
l. Samples submitted for analysis of downstream receiving water may be collected as either a grab or twenty-four-hour composite as appropriate to the nature of the discharge.
m. All instream samples, including downstream samples, shall be tested for toxicity at the 100% concentration in addition to any other assigned AEC for in-stream samples.

(2) All failing test results along with complete copies of the test reports as received from the laboratory, INCLUDING THOSE TESTS CONDUCTED UNDER CONDITION (3) BELOW, shall be reported to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the availability of the results.

(3) If the effluent fails the test, a multiple dilution test shall be performed for BOTH test species within 30 calendar days and biweekly thereafter (for storm water, tests shall be performed on the next and subsequent storm water discharges as they occur) until one of the following conditions are met:

a. THREE CONSECUTIVE MULTIPLE-DILUTION TESTS PASS. No further tests need to be performed until next regularly scheduled test period.
b. A TOTAL OF THREE MULTIPLE-DILUTION TESTS FAIL.

(4) The permittee shall submit a summary of all test results for the test series along with complete copies of the test reports as received from the laboratory to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the third failed test.

C. SPECIAL CONDITIONS (continued)

(5) Additionally, the following shall apply upon failure of the third MULTIPLE DILUTION test: A toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. The permittee shall contact THE WATER PROTECTION PROGRAM within 14 calendar days from availability of the test results to ascertain as to whether a TIE or TRE is appropriate. The permittee shall submit a plan for conducting a TIE or TRE to the WATER PROTECTION PROGRAM within 60 calendar days of the date of DNR's direction to perform either a TIE or TRE. This plan must be approved by DNR before the TIE or TRE is begun. A schedule for completing the TIE or TRE shall be established in the plan approval.
(6) Upon DNR's approval, the TIE/TRE schedule may be modified if toxicity is intermittent during the TIE/TRE investigations. A revised WET test schedule may be established by DNR for this period.
(7) If a previously completed TIE has clearly identified the cause of toxicity, additional TIEs will not be required as long as effluent characteristics remain essentially unchanged and the permittee is proceeding according to a DNR approved schedule to complete a TRE and reduce toxicity. Regularly scheduled WET testing as required in the permit, without the follow-up requirements, will be required during this period.
(8) When WET test sampling is required to run over one DMR period, each DMR report shall contain a copy of the Department's WET test report form that was generated during the reporting period.
(9) Submit a concise summary in tabular format of all WET test results with the annual report.

(b) PASS/FAIL procedure and effluent limitations:
(1) To pass a multiple-dilution test:
a. For facilities with a computed percent effluent at the edge of the zone of initial dilution, Allowable Effluent Concentration (AEC) OF 30% OR LESS, the AEC must be less than three-tenths (0.3) of the LC_{50} concentration for the most sensitive of the test organisms; **OR**,
b. For facilities with an AEC greater than 30%, the LC50 concentration must be greater than 100%; **AND**,
c. all effluent concentrations equal to or less than the AEC must be nontoxic. Mortality observed in all effluent concentrations equal to or less than the AEC shall not be significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the upstream receiving-water control sample. Where upstream receiving water is not available mortality observed in the AEC test concentration shall not be significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the laboratory control. The appropriate statistical tests of significance shall be consistent with the most current edition of METHODS FOR MEASURING THE ACUTE TOXICITY OF EFFLUENTS AND RECEIVING WATERS TO FRESHWATER AND MARINE ORGANISMS or other federal guidelines as appropriate or required. Failure of one multiple-dilution test may be considered an effluent limit violation.

(c) Test Conditions
(1) Test Type: Acute Static non-renewal
(2) All tests, including repeat tests for previous failures, shall include both test species listed below.
(3) Test species: Ceriodaphnia dubia and Pimephales promelas (fathead minnow). Organisms used in WET testing shall come from cultures reared for the purpose of conducting toxicity tests and cultured in a manner consistent with the most current USEPA guidelines. All test animals shall be cultured as described in the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.
(4) Test period: 48 hours at the "Acceptable Effluent Concentration" (AEC) specified above.
(5) Upstream receiving stream water shall be used as dilution water. If upstream water is unavailable or if mortality in the upstream water exceeds 10%, "reconstituted" water will be used as dilution water. Procedures for generating reconstituted water will be supplied by the MDNR upon request.
(6) Multiple-dilution tests will be run with:
a. 100%, 50%, 25%, 12.5%, and 6.25% effluent, unless the AEC is less than 25% effluent, in which case dilutions will be 4 times the AEC, two times the AEC, AEC, 1/2 AEC and 1/4 AEC;
b. 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent; and
c. reconstituted water.
(7) If reconstituted-water control mortality for a test species exceeds 10%, the entire test will be rerun.
(8) If upstream control mortality exceeds 10%, the entire test will be rerun using reconstituted water as the dilutant.

D. SCHEDULE OF COMPLIANCE

1. The final daily maximum and monthly average limits for Outfall #001 and Outfall #002 shall become effective three (3) years after the issue date of the permit. The Effluent Regulation, 10 CSR 20-7.031(10) allows the permittee up to three (3) years from the issuance date of this permit to comply with new or revised National Pollutant Discharge Elimination System (NPDES) or Missouri operating permit limitations based on criteria in the Clean Water Commission Regulations. It states that such compliance "shall be achieved with all deliberate speed and no later than three (3) years from the date of issuance of the permit." Therefore modifications to the facility must be made if they are required for the discharge from the facility to meet the final effluent limits of this permit.

2. The City of Columbia shall submit a letter to the Department by **July 6, 2013** detailing how the facility plans on meeting the final effluent limitations.

3. The City of Columbia shall submit interim progress reports every 12 months from **July 6, 2012**.

4. The Columbia Municipal Power Plant will meet final effluent limits by **July 6, 2015**.

REPORTING OF EFFLUENT VIOLATIONS

If any of the sampling results from any of the outfalls show any violation of the permit discharge limitations, written notification shall be made to the Department of Natural Resources within five (5) days of notification of analytical results. Notification shall indicate the date(s) of sample collection, the analytical results, and permit number, and shall include a statement concerning the revisions or modifications in management practices that are being implemented to address the violation of the limitations that occurred.

After a violation has been reported, a sample resulting from the next discharge event shall be collected at outfall(s) for which the violation occurred. Analytical results of this sample shall be submitted in writing to the Department of Natural Resources (this section supersedes Standard Conditions Part I, Section B: Noncompliance Notification).

RECORDS, RETENTION, AND RECORDING

Monitoring reports shall be submitted within 28 days after the end of each quarter. All sampling data and inspection reports shall be maintained by the permittee for a period of five (5) years and shall be supplied to the Department of Natural Resources upon request (supersedes Standard Conditions Part I, Section A, #7 - Records Retention). A copy of all of the sampling data must be submitted with an application for reissuance of this permit.

PERMIT TRANSFER

This permit may be transferred to a new owner by submitting an "Application for Transfer of Operating Permit" signed by the seller and buyer of the facility, along with the appropriate modification fee.

PERMIT RENEWAL REQUIREMENTS

Unless this permit is terminated, the permittee shall submit an application for the renewal of this permit no later than six (6) months prior to the permit's expiration date. Failure to apply for renewal may result in termination of this permit and enforcement action to compel compliance with this condition and the Missouri Clean Water Law.

TERMINATION

In order to terminate this permit, the permittee shall notify the Department by submitting Form J, included with the State Operating Permit. The permittee shall complete Form J and mail it to the Department at the address noted in the cover letter of this permit. Proper closure of any storage structure is required prior to permit termination. A closure plan shall be submitted to the Department and approved prior to initiating closure activities.

DUTY OF COMPLIANCE

The permittee shall comply with all conditions of this permit. Any noncompliance with this permit constitutes a violation of Chapter 644, Missouri Clean Water Law, and 10 CSR 20-6. Noncompliance may result in enforcement action, termination of this authorization, or denial of the permittee's request for renewal. This permit authorizes only the activities described in this permit.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF MODIFICATION
OF
MO-0004979
COLUMBIA MUNICIPAL POWER PLANT

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of storm water from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)2.] a Factsheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (operating permit) listed below.

A Factsheet is not an enforceable part of an operating permit.

This Factsheet is for an Industrial Facility ☒

Part I – Facility Information

Facility Type: IND
Facility SIC Code(s): 4911

Comments:
The Columbia Municipal Power Plant requested modification of the existing permit to address two issues that included; SWPPP requirements and adding flexibility to Special Condition #15 regarding Priority Pollutants. The permit writer reviewed the requests and made the following changes; the SWPPP inspection frequency was reduced to monthly and some requirements were removed bringing the requirements in line with requirements in recently drafted permits for coal power plant permits and added language to allow flexibility to sampling for Priority Pollutants.

Part II – Finding of Affordability

Pursuant to Section 644.145, RSMo., the Department is required to determine whether a permit or decision is affordable and makes a finding of affordability for certain permitting and enforcement decisions. This requirement applies to discharges from combined or separate sanitary sewer systems or publically-owned treatment works.

☒ Not Applicable; The Department did not conduct a finding of affordability as the modifications to the permit did not add additional costs for the facility.

Part III – Administrative Requirements

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

PERMIT SYNCHRONIZATION:
The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. This will allow further streamlining by placing multiple permits within a smaller geographic area on public notice simultaneously, thereby reducing repeated administrative efforts. This will also allow the department to explore a watershed based permitting effort at some point in the future.

PUBLIC NOTICE:
The Department shall give public notice that a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing.

The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit.

For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

☒ - The Public Notice period for this operating permit was from December 13, 2013 to January 13, 2014. Responses to the Public Notice of this operating permit warranted the correction of a typographic error in Special Condition #16.

DATE OF FACT SHEET: MAY 17, 2013; **UPDATED:** NOVEMBER 14, 2013

MODIFIED BY:

BRANT FARRIS, ENVIRONMENTAL SPECIALIST III
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - DOMESTIC WASTEWATER UNIT
(660) 385-8061
brant.farris@dnr.mo.gov

Part IV – Appendices

APPENDIX – PREVIOUS FACT SHEET

MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO-0004979
COLUMBIA MUNICIPAL POWER PLANT

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of storm water from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)2.] a Factsheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (operating permit) listed below.

A Factsheet is not an enforceable part of an operating permit.

This Factsheet is for an Industrial Facility ☒

Part I – Facility Information

Facility Type: IND
Facility SIC Code(s): 4911

Facility Description:
The Columbia Municipal Power Plant has been in service since approximately 1914. The plant currently has 86 megawatts of capacity using two solid fuel boilers, one natural gas boiler, and a natural gas fired combustion turbine. For the last 5 years (2006-2010) the plant has produced an average of 81,588 net megawatt-hours, accounting for about 7-8 % of the total energy used by the City of Columbia.

Have any changes occurred at this facility or in the receiving water body that effects effluent limit derivation?
☒ - No

Application Date: 03/12/2009
Expiration Date: 03/17/2009
Last Inspection: 01/14/2009

Non-Compliance ☒ - The facility was in non-compliance due to failing to submit the renewal application 180 days prior to the expiration date of the permit, failing to test for pH, Temperature, Free Available Chlorine, and Total Residual Chlorine at the time the sample was taken, and failing to sample before the effluent joins or is diluted by any other body of water or substance.

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (GPD)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
#001	75,000	Primary, BMPs*	Industrial, Stormwater	~ 1.2
#002	870,000	Primary, BMPs*	Industrial, Stormwater	~ 0.91

* – Best Management Practices

Outfall #001

Legal Description:	Landgrant 2753, Boone County
UTM Coordinates:	X=559181.565, Y=4313015.557
Receiving Stream:	Unnamed tributary to Bear Creek (U)
First Classified Stream and ID:	Bear Creek (C) (01015)
USGS Basin & Sub-watershed No.:	(10300102-0706)

Outfall #002

Legal Description:	Landgrant 2753, Boone County
UTM Coordinates:	X=559024.113, Y=4313222.076
Receiving Stream:	Unnamed tributary to Bear Creek (U)
First Classified Stream and ID:	Bear Creek (C) (01015)
USGS Basin & Sub-watershed No.:	(10300102-0706)

Receiving Water Body's Water Quality & Facility Performance History:
No stream surveys have been conducted for this facility. Outfall #001 - The facility failed to meet effluent limitations for Free Available Chlorine for January, February, April, and December 2008, January, February, June, July, and August 2010. The facility failed to meet effluent limitations for pH for December 2006 and January 2007. The facility failed to meet effluent limitations for Total Suspended Solids for July and August 2008. The facility also failed to submit Sulfate for March 2009 and December 2009, and Flow, Free Available Chlorine, Oil & Grease, pH, Temperature, and Total Suspended Solids for August 2006. Outfall #002 - The facility failed to meet effluent limitations for Iron and Total Suspended Solids for December 2007, and Total Suspended Solids for March 2009, April 2009, and June 2010. The facility also failed to submit Flow, Total Suspended Solids, Oil & Grease, Iron, pH, Temperature, Copper for August 2006, Total Residual Chlorine and Sulfate for March 2009, Total Residual Chlorine and Sulfate for December 2009, Free Available Chlorine for March 2010 and May 2010.

Comments:

Effluent Limitations for Temperature was removed from the permit as 10 CSR 20-7.031(4)(D) only applies to classified streams and not discharges to unclassified streams. Iron, Dissolved was removed from the permit as effluent limitations have been established for Iron, Total Recoverable. Section 316(a) of the CWA is not applicable to the facility as the facility discharges into a large holding basin which allows for the water temperature to decrease before discharge. In addition, the facility's discharge is approximately one mile from the first classified stream which allows for further reduction of water temperature. The facility has not reported any discharges that have exceeded 90° F. Also, Section 316(b) of the CWA is not applicable to the facility as the facility receives its water from the City of Columbia and onsite wells. The ash basin is approximately 4.5 acres and is dredged approximately every week. The facility is currently making arrangements to haul ash to Kansas for disposal. The City is also looking into other potential uses of the ash. The ash basin was constructed over 100 years ago and believed to be constructed of clay. As the facility removes the ash on a routine demand, groundwater monitoring is not being required for the facility, however an annual report that details the date and time, volume and methods of removal and offsite disposal of coal combustion residuals is required.

Pollutants Typically Associated with Stream Electric Industry Discharges:
Additionally, staff has reviewed the renewal applications Form C and D for each of the outfalls for this operating permit with exception to Outfall #007. Effluent testing results contained in Form C and D for each outfall were compared directly with pollutants associated with the various waste streams for each of the outfalls as established in the United States EPA document, *Interim Detailed Study Report for the Steam Electric Power Generating Point Source Category* (Interim Study Report). Pollutants contained in the Interim Study Report are based on data previously collected by the EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by the Utility Water Act Group (UWAG) and Electric Power Research Institute (EPRI). Below is the list of pollutants based on process waste streams:

- Cooling Water: Once-through or Cooling Tower Blowdown.

Chlorine, Iron, Copper, Nickel, Aluminum, Boron, Chlorinated Organic Compounds, Suspended Solids, Brominated Compounds, and Non-oxidizing Biocides.

- Ash Handling: Bottom or Fly Ash.

TSS, Sulfate, Chloride, Magnesium, Nitrate, Aluminum, Antimony, Arsenic, Boron, Cadmium, Chromium, Copper, Cyanide, Iron, Lead, Mercury, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc

- Coal Pile Runoff:

Acidity, COD, Chloride, Sulfate, TSS, Aluminum, Antimony, Arsenic, Boron, Beryllium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

- Other Low-Volume Waste Streams:

Suspended solids, Dissolved Solids, Oil & Grease, Phosphates, Surfactants, Acidity, Methylene Chloride, Phthalates, BOD_5, COD, Fecal Coliform, and Nitrates.

For the above pollutants, staff drafting this operating permit only compared the applicable pollutants based on Missouri's Water Quality Standards criteria and designated uses.

For discussion on BPJ TBEL determination, please see **Appendix B – TBEL Determination**.

Part II – Operator Certification Requirements

Not Applicable ☒; This facility is not required to have a certified operator.

Part III – Receiving Stream Information

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:
As per Missouri's Effluent Regulations [10 CSR 20-7.015], the waters of the state are divided into the below listed seven (7) categories. Each category lists effluent limitations for specific parameters, which are presented in each outfall's Effluent Limitation Table and further discussed in the Derivation & Discussion of Limits section.

Missouri or Mississippi River [10 CSR 20-7.015(2)]: ☐
Lake or Reservoir [10 CSR 20-7.015(3)]: ☐
Losing [10 CSR 20-7.015(4)]: ☐
Metropolitan No-Discharge [10 CSR 20-7.015(5)]: ☐
Special Stream [10 CSR 20-7.015(6)]: ☐
Subsurface Water [10 CSR 20-7.015(7)]: ☐
All Other Waters [10 CSR 20-7.015(8)]: ☒

10 CSR 20-7.031 Missouri Water Quality Standards, the Department defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 1st classified receiving stream's beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Unnamed tributary to Bear Creek	U	NA	General Criteria	10300102	Ozark/Moreau/Loutre
Bear Creek	C	01015	LWW, AQL, SCR, WBC-B***		

* - Irrigation (IRR), Livestock & Wildlife Watering (LWW), Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), Cool Water Fishery(CLF), Cold Water Fishery (CDF), Whole Body Contact Recreation (WBC), Secondary Contact Recreation (SCR), Drinking Water Supply (DWS), Industrial (IND), Groundwater (GRW).
** - Ecological Drainage Unit
*** - UAA conducted in 2005, 2006, and 2007. The Missouri Department of Natural Resources' Use Attainability Analysis Internal Review Committee recommended retaining Whole Body Contact (WBC) use designation to the receiving stream. As the date of writing this permit, the Clean Water Commission has not made a decision regarding the WBC use designation.

Part IV – Rationale and Derivation of Effluent Limitations & Permit Conditions

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:
As per [10 CSR 20-7.015(4)(A)], discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream and connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.

Not Applicable ☒; The facility does not discharge to a Losing Stream as defined by [10 CSR 20-2.010(36)] & [10 CSR 20-7.031(1)(N)], or is an existing facility.

ANTI-BACKSLIDING:
A provision in the Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(I)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

☒ - Limitations in this operating permit for the reissuance of this permit conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44.

ANTIDEGRADATION:
In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(2)], the Department is to document by means of Antidegradation Review that the use of a water body's available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge.

☒ - Renewal no degradation proposed and no further review necessary.

AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:
As per [10 CSR 20-6.010(3)(B)], ...An applicant may utilize a lower preference continuing authority by submitting, as part of the application, a statement waiving preferential status from each existing higher preference authority, providing the waiver does not conflict with any area-wide management plan approved under section 208 of the Federal Clean Water Act or any other regional sewage service and treatment plan approved for higher preference authority by the Department.

COAL COMBUSTION RESIDUALS (CCR):
Coal Combustion Residuals (CCR), often referred to as coal ash, is currently considered exempt wastes under an amendment to RCRA, the Resource Conservation and Recovery Act. Coal ash is residues from the combustion of coal in power plants and captured by pollution control technologies, like scrubbers. Potential environmental concerns from coal ash pertain to pollution from impoundment and landfills leaching into ground water and structural failures of impoundments.

The US EPA is currently proposing the first-ever national rules to ensure the safe disposal and management of coal ash from coal-fired power plants under RCRA, the nation's primary law for regulating solid waste. The EPA is putting forward two (2) proposals that reflect different approaches to managing the disposal of coal ash and both are to ensure the safe management of coal ash that is disposed in surface impoundments and/or landfills.

The Columbia Municipal Power Plant has one ash pond that provides treatment for fly ash and bottom ash sluice water in addition to receiving stormwater runoff and cooling tower blowdown and backwash.

COMPLIANCE AND ENFORCEMENT:
Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.

Not Applicable ☒; The permittee/facility is not currently under Water Protection Program enforcement action.

REASONABLE POTENTIAL DETERMINATION:
Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard.

In accordance with [40 CFR Part 122.44(d)(iii)] if the permit writer determines that any give pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for that pollutant.

Applicable ☒; A Reasonable Potential Determination was conducted on appropriate parameters. Please see **APPENDIX A.**

SCHEDULE OF COMPLIANCE (SOC):
A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit.

Applicable ☒; The time given for effluent limitations of this permit listed under Interim Effluent Limitation and Final Effluent Limitations were established in accordance with [10 CSR 20-7.031(10)].

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):
In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities: (2) Authorized under section 402(p) of the CWA for the control of stormwater discharges; (3) Numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (Document number EPA 833-B-09-002) [published by the United States Environmental Protection Agency (USEPA) in February 2009], BMPs are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. BMPs may take the form of a process, activity, or physical structure.

Additionally in accordance with the Stormwater Management, a SWPPP is a series of steps and activities to (1) identify sources of pollution or contamination, and (2) select and carry out actions which prevent or control the pollution of stormwater discharges.

Applicable ☒; A SWPPP shall be developed and implemented for each site and shall incorporate required practices identified by the Department with jurisdiction, incorporate erosion control practices specific to site conditions, and provide for maintenance and adherence to the plan. As Columbia Municipal Power Plant is a large industrial site, in the development of the SWPPP, they may want to use the draft SWPPP template provided by EPA and consult the Industrial Stormwater Fact Sheets developed by EPA (http://cfpub.epa.gov/npdes/stormwater/swsectors.cfm) to ensure the SWPPP is as comprehensive as possible. Fact sheets of interest may include the Sector O: Steam Electric Power Generating Facilities, Including Coal Handling Areas, Sector H: Coal Mines and Coal Mining-Related Facilities and Sector P: Motor Freight Transportation Facilities, and Rail Transportation Facilities. The fact sheets provide further references and resources for developing the SWPPP.

VARIANCE:
As per the Missouri Clean Water Law § 644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

Not Applicable ☒; This operating permit is not drafted under premises of a petition for variance.

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:
As per [10 CSR 20-2.010(78)], the amount of pollutant each discharger is allowed by the Department to release into a given stream after the Department has determined total amount of pollutant that may be discharged into that stream without endangering its water quality.

Applicable ☒; Wasteload allocations were calculated where applicable using water quality criteria or water quality model results and the dilution equation below:

$$C = \frac{(Cs \times Qs) + (Ce \times Qe)}{(Qe + Qs)}$$ (EPA/505/2-90-001, Section 4.5.5)

Where C = downstream concentration
Cs = upstream concentration
Qs = upstream flow
Ce = effluent concentration
Qe = effluent flow

Chronic wasteload allocations were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and stream volume of flow at the edge of the mixing zone (MZ). Acute wasteload allocations were determined using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow at the edge of the zone of initial dilution (ZID).

Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA's "Technical Support Document For Water Quality-based Toxics Control" (EPA/505/2-90-001).
Number of Samples "n":

Additionally, in accordance with the TSD for water quality-based permitting, effluent quality is determined by the underlying distribution of daily values, which is determined by the Long Term Average (LTA) associated with a particular Wasteload Allocation (WLA) and by the Coefficient of Variation (CV) of the effluent concentrations. Increasing or decreasing the monitoring frequency does not affect this underlying distribution or treatment performance, which should be, at a minimum, be targeted to comply with the values dictated by the WLA. Therefore, it is recommended that the actual planned frequency of monitoring normally be used to determine the value of "n" for calculating the AML. However, in situations where monitoring frequency is once per month or less, a higher value for "n" must be assumed for AML derivation purposes. Thus, the statistical procedure being employed using an assumed number of samples is "n = 4" at a minimum. For Total Ammonia as Nitrogen, "n = 30" is used.

WLA MODELING:
There are two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs). If TBELs do not provide adequate protection for the receiving waters, then WQBEL must be used.

Not Applicable ☒; A WLA study was either not submitted or determined not applicable by Department staff.

WATER QUALITY STANDARDS:
Per [10 CSR 20-7.031(3)], General Criteria shall be applicable to all waters of the state at all times including mixing zones. Additionally, [40 CFR 122.44(d)(1)] directs the Department to establish in each NPDES permit to include conditions to achieve water quality established under Section 303 of the Clean Water Act, including State narrative criteria for water quality.

WHOLE EFFLUENT TOXICITY (WET) TEST:
A WET test is a quantifiable method of determining if a discharge from a facility may be causing toxicity to aquatic life by itself, in combination with or through synergistic responses when mixed with receiving stream water.

Applicable ☒; Under the federal Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System (NPDES). WET testing is also required by 40 CFR 122.44(d)(1). WET testing ensures that the provisions in the 10 CSR 20-6.010(8)(A)7. and the Water Quality Standards 10 CSR 20-7.031(3)(D),(F),(G),(I)2.A & B are being met. Under [10 CSR 20-6.010(8)(A)4], the Department may require other terms and conditions that it deems necessary to assure compliance with the Clean Water Act and related regulations of the Missouri Clean Water Commission. In addition the following MCWL apply: §§§644.051.3 requires the Department to set permit conditions that comply with the MCWL and CWA; 644.051.4 specifically references toxicity as an item we must consider in writing permits (along with water quality-based effluent limits, pretreatment, etc…); and 644.051.5 is the basic authority to require testing conditions. WET test will be required by all facilities meeting the following criteria:

☒ Facility has Water Quality-based Effluent Limitations for toxic substances (other than NH_3)

303(d) LIST & TOTAL MAXIMUM DAILY LOAD (TMDL):

Section 303(d) of the federal Clean Water Act requires that each state identify waters that are not meeting water quality standards and for which adequate water pollution controls have not been required. Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock and wildlife. The 303(d) list helps state and federal agencies keep track of waters that are impaired but not addressed by normal water pollution control programs.

A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can absorb before its water quality is affected. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed that shall include the TMDL calculation

Not Applicable ☒; This facility does not discharge to a 303(d) listed stream.

Part V – Effluent Limits Determination

Outfall #001 – INTERIM EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Flow	MGD	1	*		*	NO	S
Total Suspended Solids	mg/L	1	50		50	NO	S
Chemical Oxygen Demand	mg/L	9	*		*	YES	**
Biochemical Oxygen Demand	mg/L	9	*		*	YES	**
pH	SU	1	6.5 – 9.0		6.5 – 9.0	YES	6.0-9.0
Oil & Grease	mg/L	1	20		15	NO	S
Total Residual Chlorine	mg/L	2/9	*		*	NO	S
Free Available Chlorine	mg/L	2/9	0.5		0.2	NO	S
Chloride + Sulfate	mg/L	2/9	*		*	YES	Previously monitoring for sulfate
Chloride	mg/L	2/9	*		*	YES	**
Aluminum, Total Recoverable	µg/L	2/9	*		*	YES	**
Antimony, Total Recoverable	µg/L	2/9	*		*	YES	**
Arsenic, Total Recoverable	µg/L	2/9	*		*	YES	**
Beryllium, Total Recoverable	µg/L	2/9	*		*	YES	**
Cadmium, Total Recoverable	µg/L	2/9	*		*	YES	**
Chromium (III), Total Recoverable	µg/L	2/9	*		*	YES	**
Chromium (VI), Dissolved	µg/L	2/9	*		*	YES	**
Cyanide, Amenable to Chlorination	µg/L	2/9	*		*	YES	**
Copper, Total Recoverable	µg/L	2/9	*		*	YES	**
Iron, Total Recoverable	µg/L	2/9	*		*	YES	**
Lead, Total Recoverable	µg/L	2/9	*		*	YES	**
Mercury, Total Recoverable	µg/L	2/9	*		*	YES	**
Nickel, Total Recoverable	µg/L	2/9	*		*	YES	**
Selenium, Total Recoverable	µg/L	2/9	*		*	YES	**
Silver, Total Recoverable	µg/L	2/9	*		*	YES	**
Thallium, Total Recoverable	µg/L	2/9	*		*	YES	**
Zinc, Total Recoverable	µg/L	2/9	*		*	YES	**
Hardness, Total	µg/L	2/9	*		*	YES	**
Polychlorinated Biphenyls	µg/L	2/9	0		0	YES	**
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

Outfall #001 - FINAL EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Flow	MGD	1	*		*	NO	S
Total Suspended Solids	mg/L	1	50		50	NO	S
Chemical Oxygen Demand	mg/L	9	*		*	NO	*
Biochemical Oxygen Demand	mg/L	9	*		*	NO	S
pH	SU	1	6.5 – 9.0		6.5 – 9.0	NO	*
Oil & Grease	mg/L	1	15		10	YES	20/15
Total Residual Chlorine	mg/L	2/9	0.017 (0.13ML)		0.008 (0.13 ML)	YES	*
Free Available Chlorine	mg/L	2/9	0.5		0.2	NO	S
Chloride + Sulfate	mg/L	2/9	1000		1000	YES	*
Chloride	mg/L	2/9	377.8		188.3	YES	*
Aluminum, Total Recoverable	µg/L	2/9	*		*	NO	*
Antimony, Total Recoverable	µg/L	2/9	*		*	NO	*
Arsenic, Total Recoverable	µg/L	2/9	*		*	NO	*
Beryllium, Total Recoverable	µg/L	2/9	*		*	NO	*
Cadmium, Total Recoverable	µg/L	2/9	*		*	NO	*
Chromium (III), Total Recoverable	µg/L	2/9	*		*	NO	*
Chromium (VI), Dissolved	µg/L	2/9	*		*	NO	*
Cyanide, Amenable to Chlorination	µg/L	2/9	*		*	NO	*
Copper, Total Recoverable	µg/L	2/9	*		*	NO	*
Iron, Total Recoverable	µg/L	2/9	*		*	NO	*
Lead, Total Recoverable	µg/L	2/9	*		*	NO	*
Mercury, Total Recoverable	µg/L	2/9	*		*	NO	*
Nickel, Total Recoverable	µg/L	2/9	*		*	NO	*
Selenium, Total Recoverable	µg/L	2/9	*		*	NO	*
Silver, Total Recoverable	µg/L	2/9	*		*	NO	*
Thallium, Total Recoverable	µg/L	2/9	*		*	NO	*
Zinc, Total Recoverable	µg/L	2/9	*		*	NO	*
Hardness, Total	µg/L	2/9	*		*	NO	*
Polychlorinated Biphenyls	µg/L	2/9	0		0	NO	0/0
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

* - Monitoring requirement only.
** - Parameter not previously established in previous state operating permit.
N/A – Not applicable
S – Same as previous operating permit

Basis for Limitations Codes:

1. State or Federal Regulation/Law
2. Water Quality Standard (includes RPA)
3. Water Quality Based Effluent Limits
4. Lagoon Policy
5. Ammonia Policy
6. Dissolved Oxygen Policy
7. Antidegradation Policy
8. Water Quality Model
9. Best Professional Judgment
10. TMDL or Permit in lieu of TMDL
11. WET Test Policy
12. Antidegradation Review

OUTFALLS #001 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow**. In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.

- **Chemical Oxygen Demand (BOD_5).** Monitoring requirement only as this is a pollutant typically found in coal pile runoff. Additional monitoring is being required to determine if limits are applicable.

- **Biochemical Oxygen Demand (BOD_5).** Monitoring requirement only as the facility stores biomass outside and exposed to precipitation. Additional monitoring is being required to determine if limits are applicable.

TECHNOLOGY-BASED EFFLUENT LIMITS (TBEL) TBELs are compared to WQBEL below.

- **pH**. In accordance with 40 CFR 423.13, pH shall be maintained in the range of 6.0 – 9.0.

- **Total Suspended Solids (TSS).** 50 mg/L as a Daily Maximum and 50 mg/L as a Monthly Average. This limit is applied to the facility based on the effluent guidelines set forth in 40 CFR 423.13

- **Free Available Chlorine**. 0.5 mg/L as a Daily Maximum and 0.2 mg/L as a Monthly Average per the applicable section of 40 CFR 423.13

- **Total Residual Chlorine (TRC)**. 0.2 mg/L as a Daily Maximum per the applicable section of 40 CFR 423.13.

- **Polychlorinated Biphenyls**. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid per the applicable section of 40 CFR 423.13.

WATER QUALITY-BASED EFFLUENT LIMITS - TBELs are compared to WQBEL below.

- **pH**. Effluent limitation range is 6.5 to 9.0 Standard pH Units (SU), as per the applicable section of 10 CSR 20-7.015. pH is not to be averaged.

- **Oil & Grease**. Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.

- **Total Residual Chlorine (TRC)**. Warm-water Protection of Aquatic Life CCC = 10 µg/L, CMC = 19 µg/L [10 CSR 20-7.031, Table A]. Background TRC = 0.0 µg/L.

  Chronic WLA: $C_e = ((0.116 + 0.0)10 – (0.0 * 0.0))/0.116$
  $C_e = 10$ µg/L
  Acute WLA: $C_e = ((0.116 + 0.0)19 – (0.0 * 0.0))/0.116$
  $C_e = 19$ µg/L
  $LTA_c = 10\ (0.290) = \mathbf{2.9}$ µg/L [CV = 1.35, 99th Percentile]
  $LTA_a = 19\ (0.157) = 3.0$ µg/L [CV = 1.35, 99th Percentile]
  Use most protective number of LTA_c or LTA_a.
  MDL = 2.9 (6.36) = 18 µg/L [CV = 1.35, 99th Percentile]
  AML = 2.9 (2.27) = 7 µg/L [CV = 1.35, 95th Percentile, n = 4]

- **Chloride + Sulfate**. 1000 mg/L as a Daily Maximum and 1000 mg/L as a Monthly Average as per Table A which references 10 CSR 20-7.031(4)(L).

- **Chloride**. The permit writers has established effluent limits as chloride is a pollutant found in coal pile runoff based on data previously collected by EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by UWAG and EPRI, and currently available pollutant data from TRI, PCS, and literature (EPA 821-R-06-015). The permit writer established effluent limits based on determining Reasonable Potential using factors other than Facility-specific Effluent Monitoring Date as listed in Section 3.1.3 of the EPA Technical Support Document for Water Quality-based Toxics Control.

- **Polychlorinated Biphenyls**. 0.000045 µg/L for Human Health Protection-Fish Consumption.

Metals

Effluent limitations for total recoverable metals were developed using methods and procedures outlined in EPA/505/2-90-001 and "The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From A Dissolved Criterion" (EPA 823-B-96-007). General warm-water fishery criteria apply and hardness of 193 mg/L.

Due to the absence of contemporaneous effluent and instream data for total recoverable metals, dissolved metals, hardness, and total suspended solids with which to calculate metals translators, partitioning between the dissolved and absorbed phases was assumed to be minimal (Section 5.7.3, EPA/505/2-90-001). Freshwater criteria conversion factors for dissolved metals were used as the metals translator as recommended in guidance (Section 1.3, 1.5.3, and Table 1, EPA 823-B-96-007). If concurrent site-specific data for total recoverable metals, dissolved metals, hardness, and total suspended solids are provided to the Department, partitioning evaluations may be considered and site-specific translators developed.

METAL	CONVERSION FACTORS
	ACUTE
Arsenic	1.0
Cadmium	0.916
Chromium III	0.316
Copper	0.960
Lead	0.695
Mercury	0.85
Nickel	0.998
Silver	0.85
Zinc	0.980

Conversion factors for Cadmium, Chromium (III), Copper, Lead, Nickel, Silver, and Zinc are hardness dependent. Values calculated using equation found in Section 1.3 of EPA 823-B-96-007 and hardness = 193 mg/L.

- **Aluminum, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Antimony, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Arsenic, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Beryllium, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Cadmium, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Chromium (III), Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Chromium (VI), Dissolved**. Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Cyanide, Amenable to Chlorination**. Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Copper, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Iron, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Lead, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Mercury, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality standards.

- **Nickel, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Selenium, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Silver, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Thallium, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Zinc, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Total Hardness**. Monitoring only requirement due to the fact that Metals toxicity varies by hardness.

WQBEL vs. TBEL

Pollutant	TBEL		WQBEL	
	Daily Maximum	Monthly Average	Daily Maximum	Monthly Average
TSS	**50 mg/L**	**50 mg/L**	NA	NA
pH	6.0 – 9.0	6.0 – 9.0	**6.5 – 9.0**	**6.5 – 9.0**
Oil & Grease	NA	NA	**15**	**10**
Total Residual Chlorine	0.2		**0.017 (0.13 ML)**	**0.008 (0.13 ML)**
Free Available Chlorine	**0.5**	**0.2**	NA .	NA
Chloride + Sulfate	NA	NA	**1000**	**1000**
Chloride	NA	NA	**377.8**	**188.3**
Polychlorinated Biphenyls	**0.0**	**0.0**	0.000045 (HHF)	0.000045 (HHF)

HHF – Human Health Protection-Fish Consumption

- **Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	once/month	once/month
TSS	once/month	once/month
COD	once/month	once/month
BOD	once/month	once/month
pH	once/month	once/month
Oil & Grease	once/month	once/month
Total Residual Chlorine	once/month	once/month
Free Available Chlorine	once/month	once/month
Chloride + Sulfate	once/month	once/month
Chloride	once/month	once/month
Aluminum, Total Recoverable	once/quarter	once/quarter
Antimony, Total Recoverable	once/quarter	once/quarter
Arsenic, Total Recoverable	once/quarter	once/quarter
Beryllium, Total Recoverable	once/quarter	once/quarter
Cadmium, Total Recoverable	once/quarter	once/quarter
Chromium III, Total Recoverable	once/quarter	once/quarter
Chromium VI, Dissolved	once/quarter	once/quarter
Cyanide, Amenable to Chlorination	once/quarter	once/quarter
Copper, Total Recoverable	once/quarter	once/quarter
Iron, Total Recoverable	once/quarter	once/quarter
Lead, Total Recoverable	once/quarter	once/quarter
Mercury, Total Recoverable	once/quarter	once/quarter
Nickel, Total Recoverable	once/quarter	once/quarter
Selenium, Total Recoverable	once/quarter	once/quarter
Silver, Total Recoverable	once/quarter	once/quarter
Thallium, Total Recoverable	once/quarter	once/quarter
Zinc, Total Recoverable	once/quarter	once/quarter
Hardness, Total	once/quarter	once/quarter
Polychlorinated Biphenyls	once/year	once/year

Outfall #002 – INTERIM EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Flow	MGD	1	*		*	NO	S
Total Suspended Solids	mg/L	1	50		50	YES	100/30
Chemical Oxygen Demand	mg/L	9	*		*	YES	**
Biochemical Oxygen Demand	mg/L	9	*		*	YES	**
pH	SU	1	6.5 – 9.0		6.5 – 9.0	YES	6.0-9.0
Oil & Grease	mg/L	1	20		15	NO	S
Total Residual Chlorine	mg/L	2/9	*		*	NO	S
Free Available Chlorine	mg/L	2/9	0.5		0.2	NO	S
Chloride + Sulfate	mg/L	2/9	*		*	YES	Previously monitoring for sulfate
Chloride	mg/L	2/9	*		*	YES	**
Aluminum, Total Recoverable	µg/L	2/9	*		*	YES	**
Antimony, Total Recoverable	µg/L	2/9	*		*	YES	**
Arsenic, Total Recoverable	µg/L	2/9	*		*	YES	**
Beryllium, Total Recoverable	µg/L	2/9	*		*	YES	**
Cadmium, Total Recoverable	µg/L	2/9	*		*	YES	**
Chromium (III), Total Recoverable	µg/L	2/9	*		*	YES	**
Chromium (VI), Dissolved	µg/L	2/9	*		*	YES	**
Cyanide, Amenable to Chlorination	µg/L	2/9	*		*	YES	**
Copper, Total Recoverable	µg/L	2/9	1.0		1.0	NO	S
Iron, Total Recoverable	µg/L	2/9	*		*	YES	**
Lead, Total Recoverable	µg/L	2/9	*		*	YES	**
Mercury, Total Recoverable	µg/L	2/9	*		*	YES	**
Nickel, Total Recoverable	µg/L	2/9	*		*	YES	**
Selenium, Total Recoverable	µg/L	2/9	*		*	YES	**
Silver, Total Recoverable	µg/L	2/9	*		*	YES	**
Thallium, Total Recoverable	µg/L	2/9	*		*	YES	**
Zinc, Total Recoverable	µg/L	2/9	*		*	YES	**
Hardness, Total	µg/L	2/9	*		*	YES	**
Polychlorinated Biphenyls	µg/L	2/9	0.0		0.0	YES	**
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

Outfall #002 - FINAL EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Flow	MGD	1	*		*	NO	S
Total Suspended Solids	mg/L	1	50		50	NO	S
Chemical Oxygen Demand	mg/L	9	*		*	NO	*
Biochemical Oxygen Demand	mg/L	9	*		*	NO	S
pH	SU	1	6.5 – 9.0		6.5 – 9.0	NO	*
Oil & Grease	mg/L	1	15		10	YES	20/15
Total Residual Chlorine	mg/L	2/9	0.017 (0.13ML)		0.008 (0.13 ML)	YES	*
Free Available Chlorine	mg/L	2/9	0.5		0.2	NO	S
Chloride + Sulfate	mg/L	2/9	1000		1000	YES	*
Chloride	mg/L	2/9	377.8		188.3	YES	*
Aluminum, Total Recoverable	µg/L	2/9	*		*	YES	*
Antimony, Total Recoverable	µg/L	2/9	*		*	YES	*
Arsenic, Total Recoverable	µg/L	2/9	*		*	YES	*
Beryllium, Total Recoverable	µg/L	2/9	*		*	YES	*
Cadmium, Total Recoverable	µg/L	2/9	*		*	YES	*
Chromium (III), Total Recoverable	µg/L	2/9	*		*	YES	*
Chromium (VI), Dissolved	µg/L	2/9	*		*	YES	*
Cyanide, Amenable to Chlorination	µg/L	2/9	*		*	YES	*
Copper, Total Recoverable	µg/L	2/9	40.6		15.8	YES	1.0 mg/L
Iron, Total Recoverable	µg/L	2/9	1825.6		627.6	YES	*
Lead, Total Recoverable	µg/L	2/9	*		*	YES	*
Mercury, Total Recoverable	µg/L	2/9	*		*	YES	*
Nickel, Total Recoverable	µg/L	2/9	*		*	YES	*
Selenium, Total Recoverable	µg/L	2/9	*		*	YES	*
Silver, Total Recoverable	µg/L	2/9	*		*	YES	*
Thallium, Total Recoverable	µg/L	2/9	*		*	YES	*
Zinc, Total Recoverable	µg/L	2/9	*		*	YES	*
Hardness, Total	µg/L	2/9	*		*	NO	*
Polychlorinated Biphenyls	µg/L	2/9	0.0		0.0	NO	0/0
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

* - Monitoring requirement only.
** - Parameter not previously established in previous state operating permit.
N/A – Not applicable
S – Same as previous operating permit

Basis for Limitations Codes:

1. State or Federal Regulation/Law
2. Water Quality Standard (includes RPA)
3. Water Quality Based Effluent Limits
4. Lagoon Policy
5. Ammonia Policy
6. Dissolved Oxygen Policy
7. Antidegradation Policy
8. Water Quality Model
9. Best Professional Judgment
10. TMDL or Permit in lieu of TMDL
11. WET Test Policy
12. Antidegradation Review

OUTFALLS #001 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow**. In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.

- **Chemical Oxygen Demand (BOD_5).** Monitoring requirement only as this is a pollutant typically found in coal pile runoff. Additional monitoring is being required to determine if limits are applicable.

- **Biochemical Oxygen Demand (BOD_5).** Monitoring requirement only as the facility stores biomass outside and exposed to precipitation. Additional monitoring is being required to determine if limits are applicable.

TECHNOLOGY-BASED EFFLUENT LIMITS (TBEL) TBELs are compared to WQBEL below.

- **pH**. In accordance with 40 CFR 423.13, pH shall be maintained in the range of 6.0 – 9.0.

- **Total Suspended Solids (TSS).** 50 mg/L as a Daily Maximum and 50 mg/L as a Monthly Average. This limit is applied to the facility based on the effluent guidelines set forth in 40 CFR 423.13 The previous permit established a daily maximum of 100 mg/L and a monthly average of 30 mg/L, however, the effluent limits was established in error as there are no effluent limitations other than the TBELs for this parameter.

- **Free Available Chlorine**. 0.5 mg/L as a Daily Maximum and 0.2 mg/L as a Monthly Average per the applicable section of 40 CFR 423.13

- **Total Residual Chlorine (TRC)**. 0.2 mg/L as a Daily Maximum per the applicable section of 40 CFR 423.13.

- **Polychlorinated Biphenyls**. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid per the applicable section of 40 CFR 423.13.

WATER QUALITY-BASED EFFLUENT LIMITS - TBELs are compared to WQBEL below.

- **pH**. Effluent limitation range is 6.5 to 9.0 Standard pH Units (SU), as per the applicable section of 10 CSR 20-7.015. pH is not to be averaged.

- **Oil & Grease**. Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.

- **Total Residual Chlorine (TRC)**. Warm-water Protection of Aquatic Life CCC = 10 µg/L, CMC = 19 µg/L [10 CSR 20-7.031, Table A]. Background TRC = 0.0 µg/L.

  Chronic WLA: $C_e = ((0.116 + 0.0)10 – (0.0 * 0.0))/0.116$
  $C_e = 10$ µg/L

  Acute WLA: $C_e = ((0.116 + 0.0)19 – (0.0 * 0.0))/0.116$
  $C_e = 19$ µg/L

  $LTA_c = 10\ (0.290) = \mathbf{2.9}$ µg/L [CV = 1.35, 99th Percentile]
  $LTA_a = 19\ (0.157) = 3.0$ µg/L [CV = 1.35, 99th Percentile]
  Use most protective number of LTA_c or LTA_a.
  MDL = 2.9 (6.36) = 18 µg/L [CV = 1.35, 99th Percentile]
  AML = 2.9 (2.27) = 7 µg/L [CV = 1.35, 95th Percentile, n = 4]

- **Chloride + Sulfate**. 1000 mg/L as a Daily Maximum and 1000 mg/L as a Monthly Average as per Table A which references 10 CSR 20-7.031(4)(L).

- **Chloride**. The permit writer has established effluent limits for chloride. Chloride is a pollutant found in coal pile runoff based on data previously collected by EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by UWAG and EPRI, and currently available pollutant data from TRI, PCS, and literature (EPA 821-R-06-015). The permit writer established effluent limits based on determining Reasonable Potential using factors other than Facility-specific Effluent Monitoring Date as listed in Section 3.1.3 of the EPA Technical Support Document for Water Quality-based Toxics Control.

- **Polychlorinated Biphenyls**. 0.000045 µg/L for Human Health Protection-Fish Consumption.

Metals

Effluent limitations for total recoverable metals were developed using methods and procedures outlined in EPA/505/2-90-001 and "The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From A Dissolved Criterion" (EPA 823-B-96-007). General warm-water fishery criteria apply. The facility provided hardness data which showed a hardness of 310 mg/L

Due to the absence of contemporaneous effluent and instream data for total recoverable metals, dissolved metals, hardness, and total suspended solids with which to calculate metals translators, partitioning between the dissolved and absorbed phases was assumed to be minimal (Section 5.7.3, EPA/505/2-90-001). Freshwater criteria conversion factors for dissolved metals were used as the metals translator as recommended in guidance (Section 1.3, 1.5.3, and Table 1, EPA 823-B-96-007). If concurrent site-specific data for total recoverable metals, dissolved metals, hardness, and total suspended solids are provided to the Department, partitioning evaluations may be considered and site-specific translators developed.

METAL	CONVERSION FACTORS
	ACUTE
Arsenic	1.0
Cadmium	0.916
Chromium III	0.316
Copper	0.960
Lead	0.695
Mercury	0.85
Nickel	0.998
Silver	0.85
Zinc	0.980

Conversion factors for Cadmium, Chromium, Copper, Lead, Nickel, Silver, and Zinc are hardness dependent. Values calculated using equation found in Section 1.3 of EPA 823-B-96-007 and hardness = 310 mg/L.

- **Aluminum, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Antimony, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Arsenic, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Beryllium, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Cadmium, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Chromium (III), Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Chromium (VI), Dissolved**. Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Cyanide, Amenable to Chlorination**. Monitoring only requirement to determine if the facility has the potential to violate water quality.

- **Copper, Total Recoverable**. Protection of Aquatic Life Chronic Criteria = 23.5 µg/L, Acute Criteria = 39 µg/L with hardness of 310 mg/L.

  Chronic =23.5/0.960 =24.53 µg/L
  Acute = 39/0.960 = 40.64 µg/L

  Chronic WLA: $C_e = ((0.886 + 0.0)24.53 – (0.0 * 0.0))/0.886$
  $C_e = 24.53$ µg/L

  Acute WLA: $C_e = ((0.886 + 0.0)39 – (0.0 * 0.0))/0.886$
  $C_e = 39$ µg/L

  $LTA_c = 24.53\ (0.359) = 8.80$ µg/L [CV = 1.049, 99th Percentile]
  $LTA_a = 39(0.195) =$ **7.9** µg/L [CV = 1.049, 99th Percentile]
  Use most protective number of LTA_c or LTA_a.

  MDL = 7.9 (5.12) = **40.6** µg/L CV = 1.049, 99th Percentile]
  AML = 7.9 (1.99) = **15.8** µg/L [CV = 1.049, 95th Percentile, n = 4]

- **Iron, Total Recoverable**. Iron does not have an acute criteria at this time; therefore, the Protection of Aquatic Life Chronic Criteria (CCC) of 1000 µg/L is applicable. No mixing allowed; therefore, the CCC = the WLA.

  $WLA_c = 1000$ µg/L
  $LTA_c = 1000$ µg/L (0.25736) = 257.36 µg/L [CV = 1.545, 99th Percentile]

  MDL = 257.36 µg/L (7.0936) = **1825.67** µg/L [CV = 1.545, 99th Percentile]
  AML = 257.36 µg/L (2.4385) = **627.6** µg/L [CV = 1.545, 95th Percentile, n = 4]

- **Lead, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Mercury, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Nickel, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Selenium, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Silver, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Thallium, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Zinc, Total Recoverable**. Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Total Hardness**. Monitoring only requirement due to the fact that Metals toxicity varies by hardness.

WQBEL vs. TBEL

Pollutant	TBEL		WQBEL	
	Daily Maximum	Monthly Average	Daily Maximum	Monthly Average
TSS	**50 mg/L**	**50 mg/L**	NA	NA
pH	6.0 – 9.0	6.0 – 9.0	**6.5 – 9.0**	**6.5 – 9.0**
Oil & Grease	NA	NA	**15**	**10**
Total Residual Chlorine	0.2		**0.017 (0.13 ML)**	**0.008 (0.13 ML)**
Free Available Chlorine	**0.5**	**0.2**	NA	NA
Chloride + Sulfate	NA	NA	**1000**	**1000**
Chloride	NA	NA	**377.8**	**188.3**
Copper, TR	NA	NA	**26**	**13**
Iron, TR	NA	NA	**1642.7**	**818.8**
Polychlorinated Biphenyls	**0.0**	**0.0**	0.000045 (HHF)	0.000045 (HHF)

HHF – Human Health Protection-Fish Consumption

- **Minimum Sampling and Reporting Frequency Requirements**.

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	once/month	once/month
TSS	once/month	once/month
COD	once/month	once/month
BOD	once/month	once/month
pH	once/month	once/month
Oil & Grease	once/month	once/month
Total Residual Chlorine	once/month	once/month
Free Available Chlorine	once/week	once/month
Chloride + Sulfate	once/month	once/month
Chloride	once/month	once/month
Aluminum, Total Recoverable	once/quarter	once/quarter
Antimony, Total Recoverable	once/quarter	once/quarter
Arsenic, Total Recoverable	once/quarter	once/quarter
Beryllium, Total Recoverable	once/quarter	once/quarter
Cadmium, Total Recoverable	once/quarter	once/quarter
Chromium III, Total Recoverable	once/quarter	once/quarter
Chromium VI, Dissolved	once/quarter	once/quarter
Cyanide, Amenable to Chlorination	once/quarter	once/quarter
Copper, Total Recoverable	once/month	once/month
Iron, Total Recoverable	once/month	once/month
Lead, Total Recoverable	once/quarter	once/quarter
Mercury, Total Recoverable	once/quarter	once/quarter
Nickel, Total Recoverable	once/quarter	once/quarter
Selenium, Total Recoverable	once/quarter	once/quarter
Silver, Total Recoverable	once/quarter	once/quarter
Thallium, Total Recoverable	once/quarter	once/quarter
Zinc, Total Recoverable	once/quarter	once/quarter
Hardness, Total	once/quarter	once/quarter
Polychlorinated Biphenyls	once/year	once/year

Test procedures for the analysis of pollutants shall be in accordance with the references methods listed in Missouri Clean Water Commission Effluent Regulation 10 CSR 20-7015(9)(A) 2. unless alternates are approved by the Department. The facility shall ensure that the testing lab uses an approved test method with a detection limit below water quality criteria for any sampling conducted, even for parameters that are listed as monitoring only, as the data collected will be used to determine if limitations need to be established.

Part VI – Administrative Requirements

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

PUBLIC NOTICE:
The Department shall give public notice that a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing.

The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit.

For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

☒ - The Public Notice period for this operating permit is tentatively schedule to begin on September 30, 2011 or is in process.

☐ - The Public Notice period for this operating permit was from (DATE) to (DATE). Responses to the Public Notice of this operating permit warrant the modification of effluent limits and/or the terms and conditions of this permit. (Please explain). (Also if applicable – Due to the major modifications of this permit, this operating permit is to be placed on Public Notice again, which is tentatively scheduled to begin in December 2013 or is in process.

☐ - The Public Notice period for this operating permit was from (DATE) to (DATE). No responses received or responses to the Public Notice of this operating permit do not warrant the modification of effluent limits and/or the terms and conditions of this permit.

DATE OF FACT SHEET: DECEMBER 7, 2011
DATE OF FACT SHEET REVISION: MAY 24, 2012

Submitted by

BRANT FARRIS, ENVIRONMENTAL SPECIALIST III
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
DOMESTIC WASTEWATER UNIT
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Part VII – Appendices

APPENDIX A

Outfall #002

Parameter	CMC*	RWC Acute*	CCC*	RWC Chronic*	n**	Range max/min	CV***	MF	RP Yes/No
Copper, Total Recoverable (µg/L)	26	229.78	16.36	229.78	73	123/2.5	1.049	1.868	Yes
Iron, Total Recoverable (µg/L)	NA	NA	1000	16651.71	73	7030/10	1.545	2.369	Yes

N/A – Not Applicable
* - Units are (µg/L) unless otherwise noted.
** - If the number of samples is greater than 10, then the CV value must be used in the WQBEL for the applicable constituent.
*** - Coefficient of Variation (CV) is calculated by dividing the Standard Deviation of the sample set by the Mean of the same sample set.
RWC – Receiving Water Concentration. It is the concentration of a toxicant or the parameter toxicity in the receiving water after mixing (if applicable).
n – Is the number of samples.
MF – Multiplying Factor. 99% Confidence Level and 99% Probability Basis.
RP – Reasonable Potential. It is where an effluent is projected or calculated to cause an excursion above a water quality standard based on a number of factors including, as a minimum, the four factors listed in 40 CFR 122.44(d)(1)(ii).

Reasonable Potential Determination is conducted as per (TSD, EPA/505/2-90-001, Section 3.3.2). A more detailed version including calculations of this determination is available upon request.

APPENDIX B – TBEL DETERMINATION

The EPA in 2009 published the "Steam Electrical Power Generating Point Source Category: Final Detailed Study Report (2009 Final Report). The 2009 Final Report summarizes data collected and analyzed from the EPA to review discharges from steam electrical power generating industry and to determine whether the current effluent guidelines for this industry and to determine whether current Effluent Limit Guidelines (ELGs) for this industry should be revised. From the 2009 Final Report, it determined a need existed to update the current effluent regulations specific to Steam Electrical Power Generating Point Sources [40 CFR Part 423]. The 2009 Final Report also concluded that the last updated version of this 1982 regulation does not adequately address the pollutants being discharged and have not kept pace with changes that have occurred in the power industry.

The 2009 Final Report identified pollutants that are commonly associated with the power industry (i.e., Flue Gas Desulfurization [FGD] & Coal Combustion Residuals [CCR]). The 2009 Final Report does not address how to determine a Pollutant of Concern (POC), but (as stated above) determined a need for the EPA to revise the current ELG 40 CFR 423. The EPA expects to complete this rulemaking and promulgate revised effluent guidelines in late 2013.

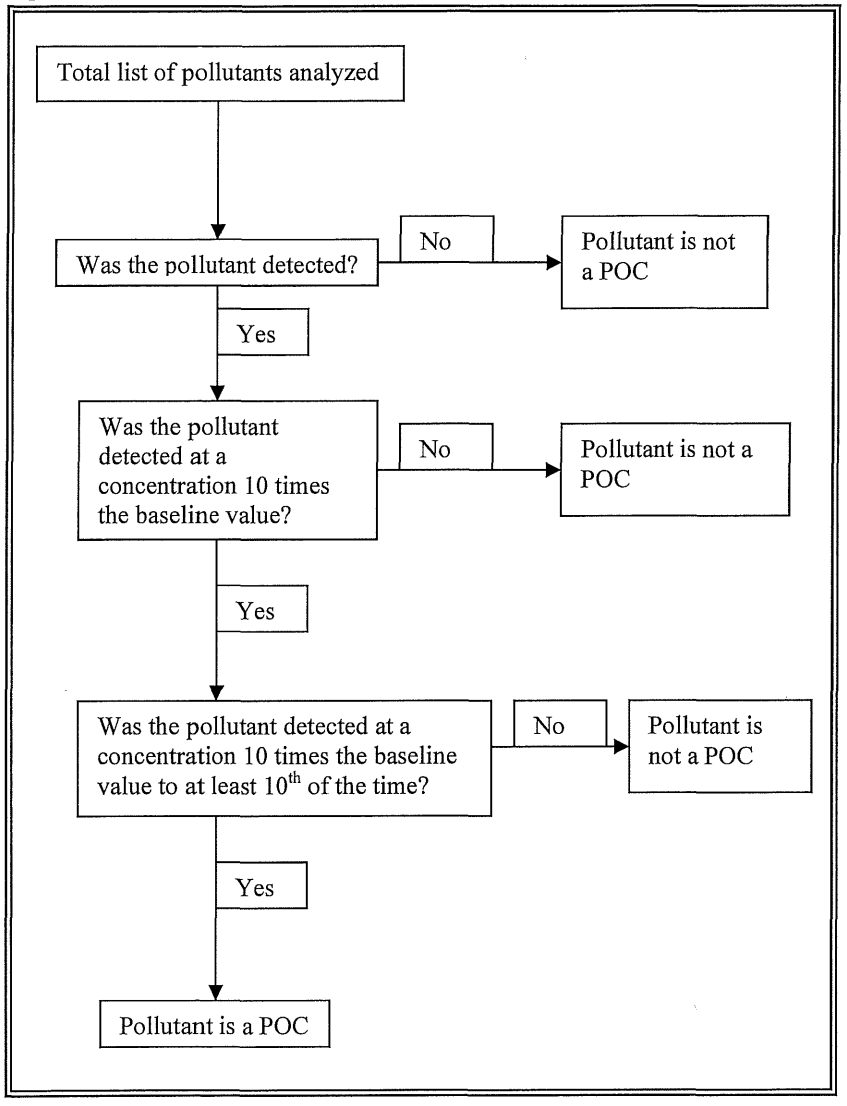
On June 7, 2010, the EPA's Office of Wastewater Management sent a memorandum with the purpose to provide interim guidance to assist permitting authorities to appropriately establish permit requirements for wastewater discharges from FGD systems and CCR impoundments at steam power plants. The 2010 EPA memo contained two (2) attachments: Appendix A – provided permitting authorities with information on how to establish TBELs for FGD; and Appendix B – was intended to assist permitting authorities to better address water quality impacts associated with discharges from coal ash impoundments. The 2010 EPA memo does not demonstrate how to determine if a pollutant needs to have TBEL limits.

Federal regulation 40 CFR Part 125.3(c) and 40 CFR Part 125.3(d) are the basis for establishing technology-based effluent limits and BPJ TBELs. To better understand these regulations, the EPA's Permit Writers Manual 5.2.3.2 discusses how to identify the need for case-by-case TBELs. In this section of the EPA Permit Writers Manual, it is the fourth bullet point that is specific to power plant industries with regard to the 2009 Final Report and the 2010 EPA memo. It states, "*When effluent guidelines are available for the industry category, but no effluent guidelines requirements are available for the pollutant of concern (e.g., a facility is regulated by the effluent guidelines for Pesticide Chemicals [Part 455] but discharges a pesticide that is not regulated by these effluent guidelines). The permit writer should make sure that the pollutant of concern is not already controlled by the effluent guideline and was not considered by the EPA when the Agency developed the effluent guideline.*"

Appendix B – TBEL Determination (continued):

In order to develop BPJ TBEL, POC should be determined first. The EPA Permit Writers Manual 5.2.1.2 informs staff to review the *Central Wastewater Treatment Category Technical Development Document,* Chapter 6, Figure 6-1 Pollutant of Concern Methodology (CWT Document). From the CWT Document, Figure 1 – How to Determine a POC has been created.

Figure 1 – How to Determine a POC



Baseline Values for the CWT Document are established in Chapter 15 of the same document. The baseline values for the potential POCs is located below. In accordance to Figure 1 and Chapter 6 of the CWT document, the baseline is multiplied by 10 prior to comparing with analyzed pollutants.

Appendix B – TBEL Determination (continued):

The below table documents the effluent samples from each of the applicable outfalls and the baseline values (x10) from Chapter 15.

Table 1

Pollutant	#001 mg/L	#002 mg/L	Baseline mg/L (x10)	Background mg/L
Aluminum	X	X	2.0	NR
Antimony	ND	ND	0.2	NR
Arsenic	0.00419	0.015	0.1	NR
Boron	X	X	1.0	NR
Cadmium	ND	ND	0.05	NR
Chromium	ND	ND	0.1	NR
Cobalt	X	X	0.5	NR
Copper	ND	0.12	0.25	NR
Iron	0.62	**5.8**	1.0	NR
Lead	ND	ND	0.5	NR
Mercury	ND	ND	0.002	NR
Molybdenum	X	X	0.1	NR
Nickel	ND	ND	0.4	NR
Nitrogen*	X	X	0.5	NR
Phosphorus	0.11	0.17	10	NR
Selenium	0.00358	.00211	0.05	NR
Thallium	ND	ND	0.1	NR
Zinc	0.087	<0.093	0.2	NR

* = Nitrogen did not have a baseline, but nitrate/nitrite does
X = believe absent – do not use
ND = Not Detected
NR = Not required

Table 1 above clearly documents that the above pollutants do not meet the initial determination of being POCs. Table 1 does; however, document that Total Iron for Outfall #002 exceeds the Baseline value (x10); however, Water Quality Based Effluent Limitations were established for Iron in the permit. Water Quality Based Effluent Limitations for Copper for Outfall #002 was also established in the permit.

Therefore, it is staff's BPJ that effluent from this facility does not contain pollutants in levels to trigger Technology-based Effluent Limitations.

STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
Revised
October 1, 1980

PART I - GENERAL CONDITIONS
SECTION A - MONITORING AND REPORTING

1. **Representative Sampling**
   a. Samples and measurements taken as required herein shal be representative of the nature and volume, respectively, of the monitored discharge. All samples shall be taken at the outfall(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.
   b. Monitoring results shall be recorded and reported on forms provided by the Department, postmarked no later than the 28th dayof the month following the completed reporting period. Signed copies of these, and all other reports required herein, shal be submitted to the respective Department Regional Office, the Regional Office address is indicated in the cover letter transmitting the permit.

2. **Schedule of Compliance**
   No later than fourteen (14) calendar days following each date identified in the "Schedule of Compliance", the permittee shall submit to the respective Department Regional Office as required therein, either a repet of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduld requirements, or if there are no more scheduled requirements, when such noncompliance will be corrected. The Regional Office address is indicated in the cover letter transmitting he permit.

3. **Definitions**
   Definitions as set forth in the Missouri Clean Water Law and Missouri Clean Water Commission Definition Regulation 10 CSR 20-2.010 shall apply to terms used herein.

4. **Test Procedures**
   Test procedures for the analysis of pollutant shall be in accordance with the Missouri Clean Water Commission Effluent Regulation 10 CSR 20-7015.

5. **Recording of Results**
   a. For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:
      (i) the date, exact place, and time of sampling or measurements;
      (ii) the individual(s) who performed the sampling or measurements;
      (iii) the date(s) analyses were performed;
      (iv) the individual(s) who performed the analyses;
      (v) the analytical techniques or methods used; and
      (vi) the results of such analyses.
   b. The Federal Clean Water Act provides that anyperson who falsifies, tampers with, or knowingly renders inaccurate anymonitoring device or method required to be maintained under this permit shall, upon conviction, be punished bya fine of not more than $10,000 per violation, or by imprisonment for not more than six (6) months per violation, or both.
   c. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

6. **Additional Monitoring by Permittee**
   If the permittee monitors any pollutant at the location(s) designated herein more frequently than required bythis permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Monitoring Report Form. Such increased frequencyshall also be indicated.

7. **Records Retention**
   The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recording for continuous monitoring instrumentation, copies of all reports required bythis permit, and records of all data used tocomplete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended byrequest of the Department at anytime.

SECTION B - MANAGEMENT REQUIREMENTS

1. **Change in Discharge**
   a. All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant not authorized by this permit or any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit.
   b. Any facility expansions, production increases, or process modifications which will result in new, different, or increased discharges of pollutants shall be reported by submission of a new NPDES application at least sixty(60) days before each such changes, or, if they will not violate the effluent limitations specified in the permit, by notice to the Department at least thirty(30) days before such changes.

2. **Noncompliance Notification**
   a. If, for any reason, the permittee does not comply with or will be unable to comply with any daily maximum effluent limitation specified in this permit, the permittee shall provide the Department with the following information, in writing within five (5) days of becoming aware of such conditions:
      (i) a description of the discharge and cause of noncompliance, and
      (ii) the period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps beingtaken to reduce, eliminate and prevent `recurrence of the noncomplying discharge.
   b. Twenty-four hour reporting. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally with 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided with five (5) days of the time the permittee becomes aware of the circumstances. The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

3. **Facilities Operation**
   Permittees shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions. Operators or supervisors of operations at publicly owned or publicly regulated wastewater treatment facilities shall be certified in accordance with 10 CSR 209.020(2) and any other applicable law or regulation. Operators of other wastewater treatment facilities, water contaminant source or point sources, shall, upon request bythe Department, demonstrate that wastewater treatment equipment and facilities are effectively operated and maintained bycompetent personnel.

4. **Adverse Impact**
   The permittee shall take all necessary steps to minimize any adverse impact to waters of the state resulting from noncompliance with any effluent limitations specified in this permit or set forth in the Missouri Clean Water Law and Regulations (hereinafter the law and Regulations), including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

a. Any bypass or shut down of a wastewater treatment facility and tributary sewer system or any part of such a facility and sewer system that results in a violation of permit limits or conditions is prohibited except:
   (i) where unavoidable to prevent loss of life, personal injury, or severe property damages; and
   (ii) where unavoidable excessive storm drainage or runoff would catastrophically damage any facilities or processes necessary for compliance with the effluent limitations and conditions of this permit;
   (iii) where maintenance is necessaryto ensure efficient operation and alternative measures have been taken to maintain effluent quality during the period of maintenance.

b. The permittee shall notify the Department in writing of all bypasses or shut down that result in a violation of permit limits or conditions. This section does not excuse any person from liability, unless such relief is otherwise provided by the statute.

6. **Removed Substances**
Solids, sludges, filter backwash, or any other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutants from entering waters of the state unless permitted by the Law, and a permanent record of the date and time, volume and methods of removal and disposal of such substances shall be maintained by the permittee.

7. **Power Failures**
In order to maintain compliance with the effluent limitations and other provisions of this permit; the permittee shall either:
a. in accordance with the "Schedule of Compliance", provide an alternative power source sufficient to operate the wastewater control facilities; or,
b. if such alternative power source is not in existence, and nodate for its implementation appears in the Compliance Schedule, halt or otherwise control production and all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

8. **Right of Entry**
For the purpose of inspecting, monitoring, or sampling the point source, water contaminant source, or wastewater treatment facility for compliance with the Clean Water Law and these regulations, authorized representatives of the Department, shall be allowed by the permittee, upon presentation of credentials and at reasonable times;
a. to enter upon permittee's premises in which a point source, water contaminant source, or wastewater treatment facility is located or in which any records are required to be kept under terms and conditions of the permit;
b. to have access to, or copy, any records required to be kept under terms and conditions of the permit;
c. to inspect any monitoring equipment or method required in the permit;
d. to inspect any collection, treatment, or discharge facility covered under the permit; and
e. to sample any wastewater at any point in the collection system or treatment process.

9. **Permits Transferable**
a. Subject to Section (3) of 10 CSR 20-6.010 an operating permit may be transferred upon submission to the Department of an application to transfer signed by a new owner. Until such time as the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
b. The Department, within thirty(30) days of receipt of the application shall notify the new permittee of its intent to revoke and reissue or transfer the permit.

10. **Availability of Reports**
Except for data determined to be confidential under Section 308 of the Act, and the Law and Missouri Clean Water Commission Regulation for Public Participation, Hearings and Notice to Governmental Agencies 10 CSR 20-6.020, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. As required by statute, effluent data shall not be considered confidential. Knowingly making any false statement on any such report shall be subject to the imposition of criminal penalties as provided in Section 204.076 of the Law.

a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
   (i) violation of any terms or conditions of this permit or the Law;
   (ii) having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
   (iii) a change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge, or
   (iv) any reason set forth in the Law and Regulations.
b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

12. **Permit Modification - Less Stringent Requirements**
If any permit provisions are based on legal requirements which are lessened or removed, and should no other basis exist for such permit provisions, the permit shall be modified after notice and opportunity for a hearing.

13. **Civil and Criminal Liability**
Except as authorized by statute and provided in permit conditions on "Bypassing" (Standard Condition B-5) and "Power Failures" (Standard Condition B-7) nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

14. **Oil and Hazardous Substance Liability**
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act, and the Law and Regulations. Oil and hazardous materials discharges must be reported in compliance with the requirements of the Federal Clean Water Act.

15. **State Laws**
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state statute or regulations.

16. **Property Rights**
The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, no does it authorize any injury to private property or any invasion of personal rights, nor any infringement of or violation of federal, state or local laws or regulations.

17. **Duty to Reapply**
If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for a new permit 180 days prior to expiration of this permit.

18. **Toxic Pollutants**
If a toxic effluent standard, prohibition, or schedule of compliance is established, under Section 307(a) of the Federal Clean Water Act for a toxic pollutant in the discharge of permittee's facility and such standard is more stringent than the limitations in the permit, then the more stringent standard, prohibition, or schedule shall be incorporated into the permit as one of its conditions, upon notice to the permittee.

19. **Signatory Requirement**
All reports, or information submitted to the Director shall be signed (see 40 CFR-122.6).

20. **Rights Not Affected**
Nothing in this permit shall affect the permittee's right to appeal or seek a variance from applicable laws or regulations as allowed by law.

21. **Severability**
The provisions of this permit are severable, and if any provisions of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

AP 13874

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH
FORM A – APPLICATION FOR CONSTRUCTION OR OPERATING PERMIT UNDER MISSOURI CLEAN WATER LAW

FOR AGENCY USE ONLY	
CHECK NUMBER	422151
DATE RECEIVED	FEE SUBMITTED
11/16/12	$200.00 CS

Note ► PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM.

1. This application is for:
- ☐ An operating permit and antidegradation review public notice
- ☐ A construction permit following an appropriate operating permit and antidegradation review public notice
- ☐ A construction permit and concurrent operating permit and antidegradation review public notice
- ☐ A construction permit (submitted before Aug. 30, 2008 or antidegradation review is not required)
- ☐ An operating permit for a new or unpermitted facility — Construction Permit # _____
- ☐ An operating permit renewal: permit # MO- _____ — Expiration Date _____
- ☑ An operating permit modification: permit # MO- 0004979 — Reason: Remove unnecessary permit requirements

1.1 Is the appropriate fee included with the application? (See instructions for appropriate fee) ☐ YES ☐ NO

2. FACILITY

NAME		TELEPHONE WITH AREA CODE
COLUMBIA MUNICIPAL POWER PLANT		(573) 874-6236
		FAX (573) 874-1583
ADDRESS (PHYSICAL)	CITY	STATE / ZIP CODE
1501 BUSINESS LOOP 70 EAST	COLUMBIA	MO 65201

3. OWNER

NAME	E-MAIL ADDRESS	TELEPHONE WITH AREA CODE
CITY OF COLUMBIA		(573) 874-6338
		FAX (573) 442-8828
ADDRESS (MAILING)	CITY	STATE / ZIP CODE
701 EAST BROADWAY	COLUMBIA	MO 65201

3.1 Request review of draft permit prior to public notice? ☑ YES ☐ NO

4. CONTINUING AUTHORITY

NAME		TELEPHONE WITH AREA CODE
SAME AS OWNER		
		FAX
ADDRESS (MAILING)	CITY	STATE / ZIP CODE

5. OPERATOR

NAME	CERTIFICATE NUMBER	TELEPHONE WITH AREA CODE
CHRISTIAN JOHANNINGMEIER	N/A	(573) 874-6236
		FAX (573) 442-8828
ADDRESS (MAILING)	CITY	STATE / ZIP CODE
1501 BUSINESS LOOP 70 EAST	COLUMBIA	MO 65201

6. FACILITY CONTACT

NAME	TITLE	TELEPHONE WITH AREA CODE
CHRISTIAN JOHANNINGMEIER	POWER PLANT SUPERINTENDENT	(573) 874-6236
		FAX (573) 442-8828

7. ADDITIONAL FACILITY INFORMATION

7.1 Legal Description of Outfalls. (Attach additional sheets if necessary.)

001 NE ¼ NW ¼ Sec 7 T 48N R 12W Boone County
UTM Coordinates Easting (X): _____ Northing (Y): _____
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

002 SW ¼ SE ¼ Sec 6 T 48N R 12W Boone County
UTM Coordinates Easting (X): _____ Northing (Y): _____

003 ____ ¼ ____ ¼ Sec ____ T ____ R ____ ____ County
UTM Coordinates Easting (X): _____ Northing (Y): _____

004 ____ ¼ ____ ¼ Sec ____ T ____ R ____ ____ County
UTM Coordinates Easting (X): _____ Northing (Y): _____

7.2 Primary Standard Industrial Classification (SIC) and Facility North American Industrial Classification System (NAICS) Codes.

001 – SIC 4911 and NAICS 221112 002 – SIC 4911 and NAICS 221112
003 – SIC _____ and NAICS _____ 004 – SIC _____ and NAICS _____

MO 780-1479 (01-09)

RECEIVED
NOV 16 2012

8. ADDITIONAL FORMS AND MAPS NECESSARY TO COMPLETE THIS APPLICATION (Complete all forms that are applicable.)

A.	Is your facility a manufacturing, commercial, mining or silviculture waste treatment facility? If yes, complete Form C (unless storm water only, then complete U.S. Environmental Protection Agency Form 2F per Item C below).	YES ☐	NO ☑
B.	Is your facility considered a "Primary Industry" under EPA guidelines: If yes, complete Forms C and D.	YES ☑	NO ☐
C.	Is application for storm water discharges only? If yes, complete EPA Form 2F.	YES ☐	NO ☑
D.	*Attach a map showing all outfalls and the receiving stream at 1" = 2,000' scale.*		
E.	Is wastewater land applied? If yes, complete Form I.	YES ☐	NO ☑
F.	Is sludge, biosolids, ash or residuals generated, treated, stored or land applied? If yes, complete Form R.	YES ☑	NO ☐

9. DOWNSTREAM LANDOWNER(S) *Attach additional sheets as necessary. See Instructions.* (PLEASE SHOW LOCATION ON MAP. SEE 8.D ABOVE).

NAME			
#001 DAVID ROGERS, #002 COLUMBIA PUBLIC WORKS			
ADDRESS	**CITY**	**STATE**	**ZIP CODE**
1400 BUSINESS LOOP 70 EAST, 701 EAST BROADWAY	COLUMBIA	MO	65201

10. I certify that I am familiar with the information contained in the application, that to the best of my knowledge and belief such information is true, complete and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders and decisions, subject to any legitimate appeal available to applicant under the Missouri Clean Water Law to the Missouri Clean Water Commission.

NAME AND OFFICIAL TITLE (TYPE OR PRINT)	TELEPHONE WITH AREA CODE
Christian Johanningmeier	573-874-6236
SIGNATURE	**DATE SIGNED**
Christian Johanningmeier	11-6-2012

MO 780-1479 (01-09)

BEFORE MAILING, PLEASE ENSURE ALL SECTIONS ARE COMPLETED AND ADDITIONAL FORMS, IF APPLICABLE, ARE INCLUDED.

Submittal of an incomplete application may result in the application being returned.

HAVE YOU INCLUDED:

- ☐ Appropriate Fees?
- ☐ Map at 1" = 2000' scale?
- ☐ Signature?
- ☐ Form C, if applicable?
- ☐ Form D, if applicable?
- ☐ Form 2F, if applicable?
- ☐ Form I (Irrigation), if applicable?
- ☐ Form R (Sludge), if applicable?

CITY OF COLUMBIA, MISSOURI

WATER AND LIGHT DEPARTMENT
COLUMBIA TERMINAL RAILROAD

November 6, 2012

Chris Wieberg
Unit Chief, Operating Permits Section
Missouri Department of Natural Resources
Water Protection Program
P.O. Box 176
Jefferson City, MO 65102

Subject: Permit Modification Request for the Columbia Municipal Power Plant (MO-0004979)

Dear Mr. Wieberg:

With this letter and attachment, the City of Columbia (City) is requesting permit modifications for the Columbia Municipal Power Plant (MO-0004979). The requested permit modifications are intended to reduce administrative burdens to the City and prevent potential enforcement actions that are not required by regulation. The modification request includes permit concerns that had previously been identified during communications with the Missouri Department of Natural Resources (MDNR, the Department) prior to the recent operating permit re-issuance in July 2012. Unexpectedly to the City, MDNR issued the operating permit prior to the City receiving the Department's response to the latest comment letter submitted by the City. Therefore, an effective discourse on the City's remaining concerns has not yet occurred.

We appreciate the opportunity to use the permit modification process to continue the process of addressing our permit concerns with the Department. Numerous additional requirements were added to the permit compared to the previous permit. Several of these requirements have only recently emerged in power plant permits across the state and have been applied in widely different ways. We therefore see a mutual benefit in continuing our dialogue to arrive at permit conditions that take the City's concerns into further consideration and build consistency across the state.

The requested permit modifications are discussed below.

Modification 1. The City requests the Department remove specific Stormwater Pollution Prevention Plan (SWPPP) requirements (a) through (k) from special condition #12. The City is committed to developing and implementing a Stormwater Pollution Prevention Plan (SWPPP), but notes there is no regulatory requirement to require specific SWPPP provisions within a National Pollutant Discharge Elimination System (NPDES) permit. Additionally, the City notes that SWPPP requirements 12(a) through 12(k) are inconsistently applied to other coal power plant NPDES permits. For example, the AECI, New Madrid Power Plant permit (MO-0001171) only requires quarterly site inspections, whereas the Columbia Municipal Power Plant permit requires twice per month site inspections. The City also notes that other coal power plant permits include a significantly shorter list of SWPPP requirements (e.g., Springfield – John Twitty Energy Center permit, MO-0089940).

The City recognizes the Department previously considered this request and provided the following response in a letter dated July 20, 2012:

> "The provisions included in the Stormwater Pollution Prevention Plan [are] in accordance with 40 CRF 122.44(k). 40 CFR 122.44(k) require that each permit include conditions that meet the following requirements: Best Management Practices (BMPs) to control or abate the discharge of pollutants when authorized under section 402(p) of the CWA for the control of stormwater discharges or the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA."

The City agrees that the aforementioned conditions are required in a SWPPP, but again notes there is no regulatory requirement to include ***specific*** SWPPP provisions within an NPDES permit. The City is not necessarily opposed to conditions 12(a) through 12(k), but is concerned the Department is not applying these conditions equally to all coal power plant NPDES permits. The City also suggests that a SWPPP is more effectively developed based on site-specific considerations and general guidance documents rather than blanket requirements. As this U.S. Environmental Protection Agency guidance document EPA 833-B-09-002 is already referenced in the permit, the City contends that it is unnecessary to include conditions 12(a) through 12(k).

Modification 2. The City requests the Department add additional flexibilities to special condition #15 regarding the requirement for no detectable amount of priority pollutants in the cooling tower blowdown. The City believes the clear intent of 40 CFR 423.15(j)(1) is to prevent the introduction of toxics and biocides into the waste stream from cooling tower maintenance chemicals. As written, special condition #15 provides no flexibility for addressing pollutants introduced to the waste stream outside the cooling towers (i.e., there shall be ***no detectable amounts*** of the 126 Priority Pollutants). Therefore, the City requests the Department use flexibilities afforded at 40 CFR 423.15(j)(3) to allow alternative measures in lieu of monitoring. The City notes the Department has already provided such flexibilities in other permits and recommends the following language as found in the Springfield – John Twitty Energy Center permit (MO-0089940):

> "As an alternative, the facility may maintain and submit records including Material Safety Data Sheets (MSDS) of the cooling tower chemicals to document that none of the listed chemicals, apart from chromium or zinc, are added for cooling water treatment. The facility must submit MSDS copies with the first quarterly Discharge Monitoring Report following issuance of the permit and at any time thereafter when there is a change in cooling water treatment chemicals. If no biocides or chemicals are used in the cooling tower water, then report 'No biocides or chemicals used'."

The City recognizes the Department previously considered this request and provided the following response in a letter dated July 20, 2012:

> "40 CFR 423.15 only allows the following flexibility; if the facility can show by engineering calculations that the regulated pollutants are not detectable in the final discharge. As some of the regulated pollutants as listed in 40 CFR 423.15 have already been detected in the final discharge, this option is not available to the facility."

The City agrees at least one priority pollutant (i.e., copper) has been detected in the final discharge, but suggests the Department has discretion in this matter based on site-specific considerations. In particular, the City notes that copper is present in their source water. Therefore, the City cannot meet the standard of "no detectable amounts" of the 126 Priority Pollutants, but can demonstrate that none of the 126 Priority Pollutants, apart from chromium and zinc, are added for cooling water treatment. As this is the true intent of 40 CFR 423.15, the City requests the Department revise special condition #15 to the language previously suggested above.

Modification 3. The City requests the Department remove special condition #16 regarding reporting requirements for the disposal of coal combustion residuals (CCR). We note that the U.S. Environmental Protection Agency is developing the first-ever national rules on the disposal of CCRs and there is currently no regulatory requirement to report on CCR disposal practices. Additionally, we note that the Department has not included special condition #16 in other recently issued coal power plant permits (e.g., Springfield – John Twitty Energy Center permit, MO-0089940). As special condition #16 is not required by regulations and is not consistently applied to coal power plant permits, the City requests its removal.

The City recognizes the Department previously considered this request and provided the following response in a letter dated July 20, 2012:

> "As CCR[s] are potential water quality contaminants, the Department is requiring this condition to ensure that proper disposal of the contaminants is conducted."

The City shares the Department's concerns regarding the potential impacts of CCRs on water quality, but suggests special condition #16 is an unnecessary administrative burden. The City is committed to following all regulations regarding the proper disposal of CCRs, but at this time there is no regulatory requirement for special condition #16. Therefore, the City is reiterating their request for its removal.

Attached with this letter, please find a completed "Form A" that indicates a request for a permit modification. In recent correspondence with your office, we had confirmed that Form A is the only form needed at this time to process our modification request. We have also included a check for the amount of $200 payable to the Missouri Department of Natural Resources.

The City appreciates the Department's consideration of these permit modification requests and requests an opportunity to meet with you and/or your staff to further discuss our request. Please contact me by phone (573) 874-6236 or email cjj@gocolumbiamo.com to confirm your availability to meet or if you have questions or comments.

Sincerely,

Christian J. Johanningmeier, P.E.
Power Production Superintendent

Attachment:
Form A

BURNS McDONNELL

CREATE AMAZING.

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